



# ST. LOUIS DISTRICT MOBILITY

QUARTERLY REGIONAL MOBILITY REPORT ■ JUNE / JULY / AUGUST 2019 | EDITION NO. 08

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Provide Outstanding Customer Service & Deliver Transportation Services of Great Value

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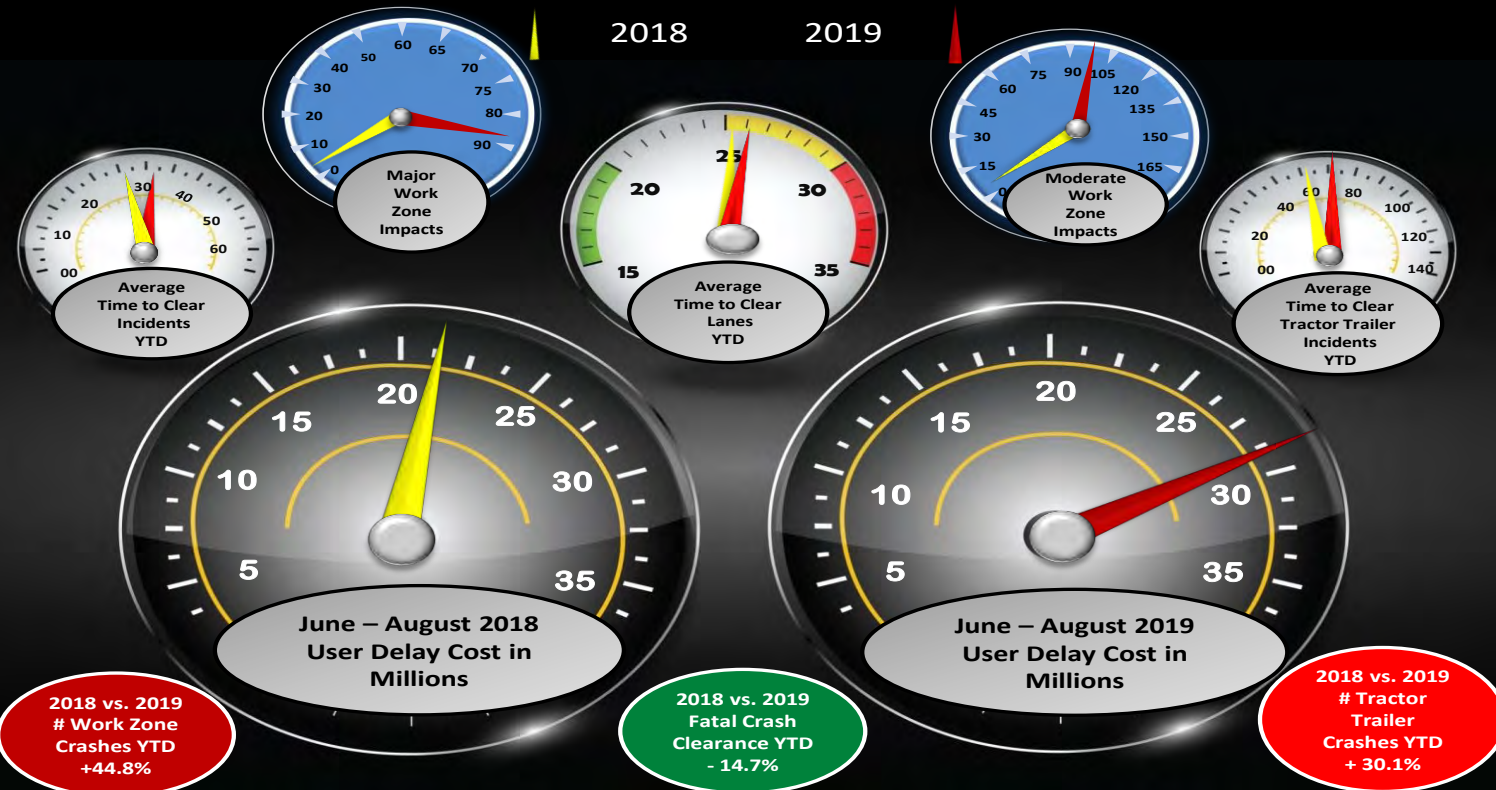
Operate a Reliable and Convenient Transportation System  
Use Resources Wisely & Advance Economic Development

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Keep Roads and Bridges in Good Condition

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Keep Customers and Ourselves Safe



User Delay Cost: Passenger Vehicle \$17.67 Commercial Vehicle \$68.09  
Sources Texas Transportation Institute & American Transportation Research Institute

#### June 2018 thru August 2018 Grand Total and Average

Delay cost:	Vehicle Miles traveled (VMT)
Total \$20,796,903	Total: 2,193,879,136 miles
Hours of delay	Passenger: 1,974,491,222 miles
Person-hours: 954,603h 0m	Commercial: 219,387,914 miles
Vehicle hours: 779,267h 45m	Delay per VMT: 0.0213 mins/mile

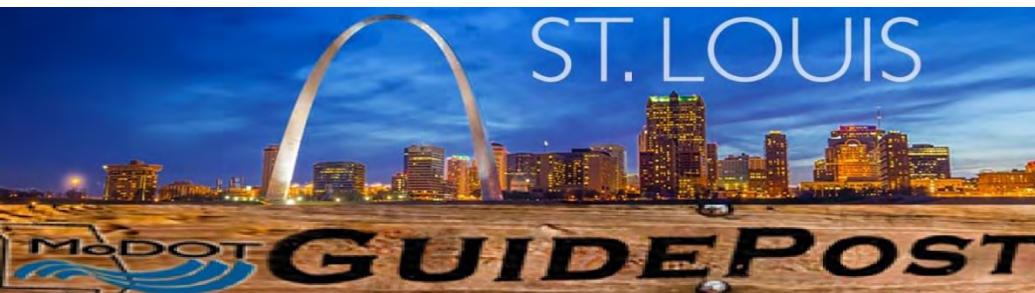
#### June 2019 thru August 2019 Grand Total and Average

Delay cost:	Vehicle Miles traveled (VMT)
Total \$28,486,235	Total: 2,184,088,123 miles
Hours of delay	Passenger: 1,965,679,311 miles
Person-hours: 1,307,552h 39m	Commercial: 218,408,812 miles
Vehicle hours: 1,067,389h 55m	Delay per VMT: 0.0293 mins/mile



# EXECUTIVE SUMMARY

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Average time to clear lanes increased by 11.2 % from Summer 2018 to Summer 2019

Mobility was impacted on I-44, Route 370, Poplar Street Bridge (IDOT project) with emergency repairs on Jefferson Barracks Bridge

Work zone crashes increased by 44.8% compared to Summer 2018

Overall regional mobility increased slightly for the AM peak period and decreased for the PM peak period.

Southbound I-270 at Dougherty Ferry took over the top congested spot this quarter.

## ZONING IN

### TMS Work Zones:

Jun	2019: 294
Jul	2019: 324
Aug	2019: 368

### Work Zone Impact Breakdown:

Major:	87 – 9.1%
Moderate:	100 – 10.5%
Minor:	768 – 80.4%

**WORK ZONE CRASHES: 42**

### Planned Event

**Date:** Entire Quarter

**Location:** Eastbound I-44 from I-270 to Jefferson / Westbound I-44 from Jefferson to I-270  
**Event Detail:** Continued Bridge work with multiple projects and daily lane closures.

### Unplanned Event

**Date:** 6-5

**Location:** Southbound/Northbound I-270 before/past I-55

**Event Detail:** A tractor trailer was traveling south when the right side of the vehicle struck the left side of a Jeep. The force of this impact caused the trailer it was hauling to flip over the wall landing on its side in the northbound left lanes. Before coming to a stop, the top of the trailer was ripped open, partially spilling the load of watermelons it was carrying.



# EXECUTIVE SUMMARY

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## Top 5 Congestion Locations / June 2018 – Aug 2018 vs. Jun 2019 – Aug 2019

\*Locations ranked on Base Impact (The aggregation of Queue Length over time for congestion originating at each location in mile minutes)

	Congestion Locations 2018	*Base Impact	Average Queue Length Miles	Average Daily Duration	Total Duration	All Events and Incidents
1	SB I-270 @ I-170	39,481.91	0.72	2h 24m	9d 5h 29m	No data for this period
2	WB I-64 @ Hampton	32,069.10	0.7	3h 18m	12d 16h 27m	
3	SB I-270 @ Dorsett Road	25,484.46	1.68	1h 31m	5d 19h 46m	
4	WB I-44 @ MO-O	22,461.86	3.96	1h 17m	4d 22h 30m	
5	WB I-64 @ Clayton Road	20,527.34	0.47	3h 47m	14d 13h 28m	

	Congestion Locations 2019	*Base Impact	Average Queue Length Miles	Average Daily Duration	Total Duration	All Events and Incidents
1	SB I-270 @ Dougherty Ferry Road	77,150.68	5.99	0h 45m	2d 22h 27m	465
2	EB I-64 @ I-55/I-44	71,177.10	1.66	1h 18m	4d 23h 38m	139
3	EB I-44 @ Highway Drive Exit 275	67,836.25	1.96	3h 27m	13d 6h 47m	98
4	WB I-64 @ Hampton	53,951.14	2.69	1h 21m	5d 5h 30m	342
5	WB I-64 @ I-70	45,298.95	2.25	1h 49m	6d 23h 21m	162

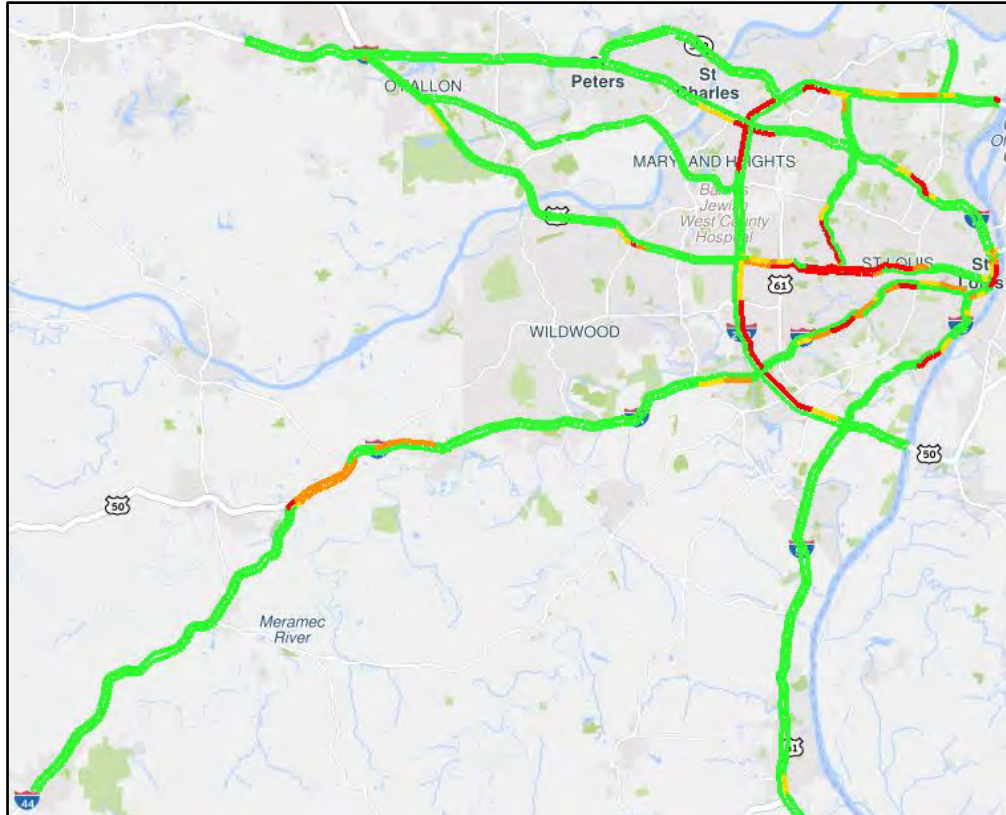
## Average Incident Duration Comparison / 2018 vs. 2019

Month	Average Incident Duration (Minutes : Seconds)	2018	2019
June	Lane Clearance	24:55	27:14
June	Incident Clearance	28:41	31:37
July	Lane Clearance	21:37	25:35
July	Incident Clearance	28:11	31:15
August	Lane Clearance	26:01	25:37
August	Incident Clearance	30:34	29:22



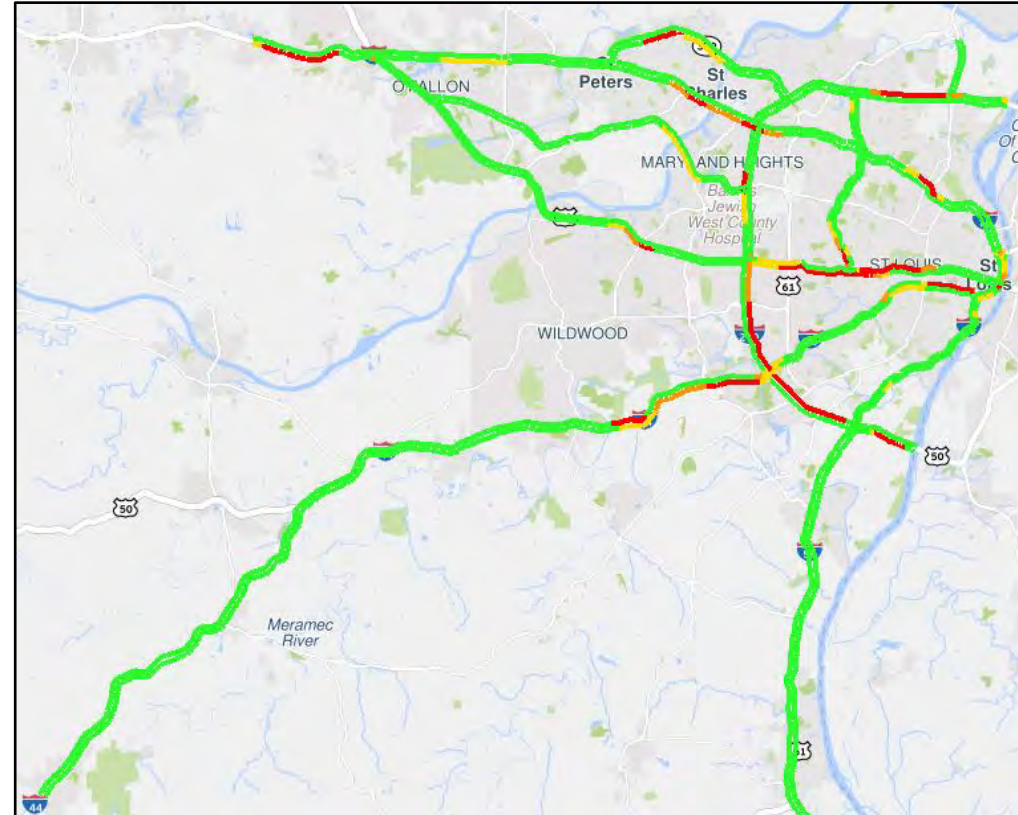
**SLIGHT INCREASE in Overall AM Mobility**

**AM Peak Mobility June/July/August 2018 vs June/July/August 2019 \***



2018

- > 90 % of free-flow speed
- 85% - 90 % of free-flow speed
- 80 % - 85 % of free-flow speed
- < 80 % of free-flow speed



2019

Regional % of free-flow speed hourly breakdown\*\*:

	2018	→	2019
6 AM	100%	→	100%
7 AM	96.0%	→	96.0%
8 AM	95.7%	→	96.0%
9 AM	99.9%	→	99.7%

\* 8am hour shown

\*\*Regional % of free-flow speed is the averaged % of free-flow speeds for all directions of all freeways within the St. Louis District. This provides a high-level measurement of overall regional mobility for each peak hour.

## Highlighted Corridor AM Summary I-270

Comparing AM June/July/August 2018 vs June/July/August 2019

**AM NB/EB I-270 Overall Mobility DECREASED for the AM peak from 2018 → 2019**

**AM SB/WB I-270 Overall Mobility INCREASED for the AM peak from 2018 → 2019**

### Active Work Zones During Peak AM Period

#### 2018 AM

Date	Route	Type of Work	Location	Lanes closed	Time
6/7-6/27	I-270	Stage 1 Construction of Bridge Rehab at Fee Fee Creek	SB I-270 between I-70 and Dorsett Inside Lanes	2 of 5	24 hours
6/26	I-270	Bridge Inspection	EB I-270 Chain of Rocks Bridge	1 of 2	8:00 am to 3:00 pm
6/28- 7/1 / 7/2	I-270	Stage 1 Construction of Bridge Rehab at Fee Fee Creek	SB I-270 between I-70 and Dorsett Outside Lanes	3 of 5	24 hours
7/3-7/4	I-270	Stage 2 Construction of Bridge Rehab at Fee Fee Creek	SB I-270 between I-70 and Dorsett Inside Lanes	2 of 5	24 hours
7/5	I-270	Stage 2 Construction of Bridge Rehab at Fee Fee Creek	SB I-270 between I-70 and Dorsett Outside Lanes	3 of 5	12:00 am to 7:00pm
7/5/ 7/6-7/11	I-270	Placing Temp Traffic Barrier/Temp Striping for Stage 2 of Bridge Rehab at Fee Fee Creek	SB I-270 between I-70 and Dorsett Inside Lanes	2 of 5	24 Hours
7/12-7/18	I-270	Stage 2 Construction of Bridge Rehab at Fee Fee Creek	SB I-270 between I-70 and Dorsett Inside Lanes	2 of 5	24 hours
7/19-7/25	I-270	Stage 2 and 3 Bridge Rehabilitation at Fee Fee Creek	SB I-270 between I-70 and Dorsett Inside Lanes	2 of 5	24 hours
7/23-7/25	I-270	Stage 3 Construction of Bridge at Fee Fee Creek	NB I-270 between Dorsett and I-70 Inside Lanes	1 of 4	24 hours
7/22-7/25	I-270	Stage 3 Construction of Bridge at Fee Fee Creek	Dorsett Ramp to NB I-270	Ramp Closed	24 hours
7/26-8/1	I-270	Stage 3 Bridge Rehabilitation at Fee Fee Creek	SB and NB I-270 between I-70 and Dorsett	2 of 5	24 hours
7/26-8/1	I-270	Stage 3 Construction of Bridge at Fee Fee Creek	Dorsett Ramp to NB I-270 Closed	Ramp Closed	24 hours
8/2-8/8	I-270	Stage 3 Bridge Rehabilitation at Fee Fee Creek	SB and NB I-270 between I-70 and Dorsett	2 of 5	24 hours
8/2-8/8	I-270	Stage 3 Construction of Bridge at Fee Fee Creek	Dorsett Ramp to NB I-270 Closed	Ramp Closed	24 hours
8/6-8/8	I-270	McKelvey Bridge Panting	NB 270 Lane 1	1 of 3	24 hours
8/9-8/15	I-270	Stage 3 Bridge Rehabilitation at Fee Fee Creek	SB and NB I-270 between I-70 and Dorsett	2 of 5	24 hours
8/9-8/13	I-270	Stage 3 Construction of Bridge at Fee Fee Creek	Dorsett Ramp to NB I-270 Closed	Ramp Closed	24 hours
8/9-8/10 8/13-8-15	I-270	McKelvey Bridge Panting	NB 270 Lane 1	1 of 3	24 hours
8/16-8/17	I-270	Stage 3 Bridge Rehabilitation at Fee Fee Creek	SB I-270 between I-70 and Dorsett	2 of 5	24 hours
8/16-8/17	I-270	Stage 3 Bridge Rehabilitation at Fee Fee Creek	NB I-270 between I-70 and Dorsett	1 of 5	24 hours

#### 2019 AM

Date	Route	Type of Work	Location	Lanes closed	Time
6/14-7/20	I-270	New Concrete Ramp	270 SB to I-70 EB and WB	Ramp closed	24 hours
6/20-6/21	I-270	Bridge Inspection	RT lane on Mississippi River Bridge	1 of 2	8:00 am to 3:00 pm
8/24	I-270	New Concrete Pavement	NB I-270 ramp to EB I-44 closed	Ramp closed	6:00 am to 9:00 am





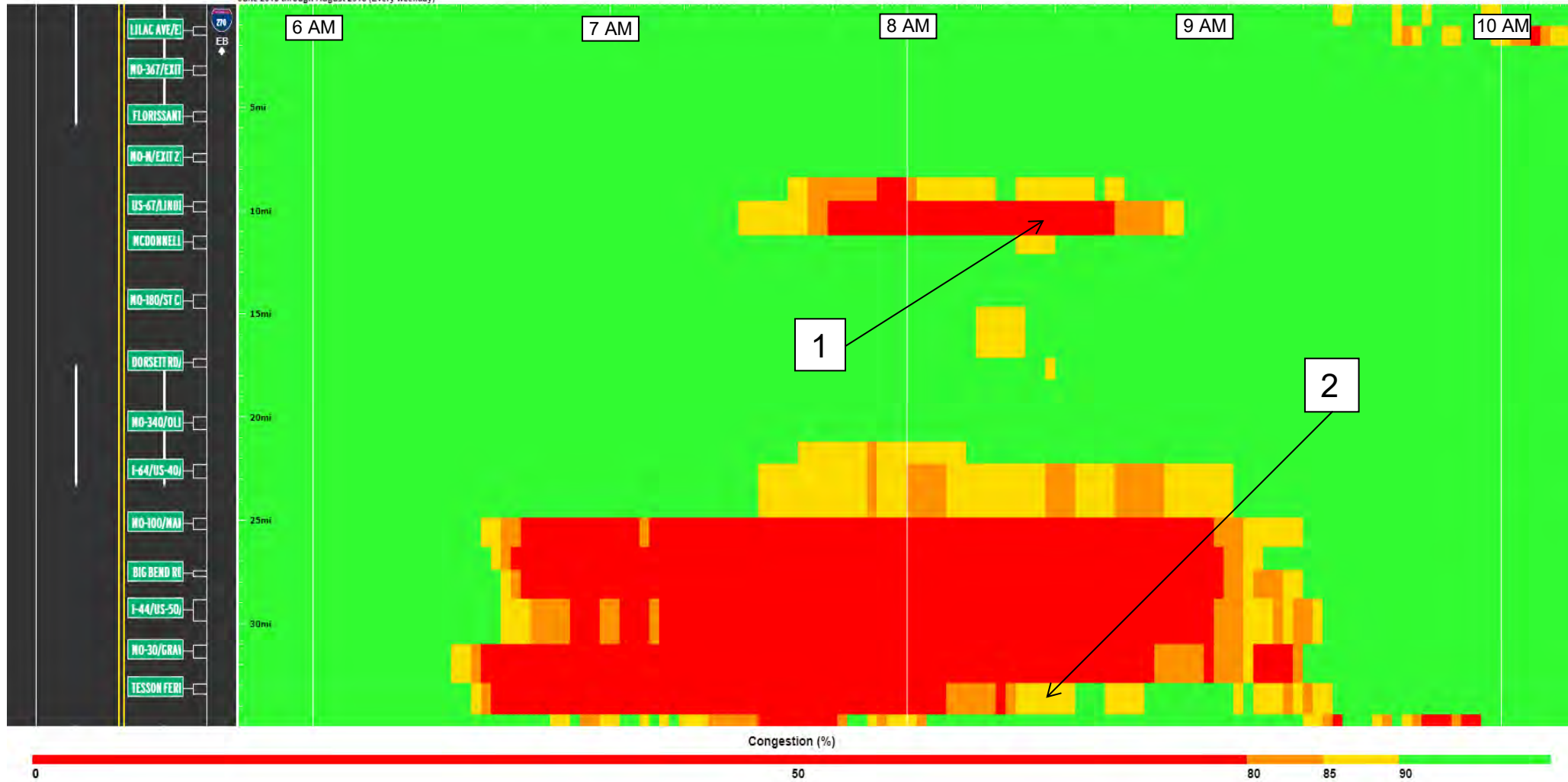
# FREEWAY MANAGEMENT

AM 2018 NB/EB I-270

Congestion for I-270 Eastbound and I-270 Northbound using HERE data

Averaged by 2 minutes for June 2018 through August 2018 (Every weekday)

June 2018 through August 2018 (Every weekday)





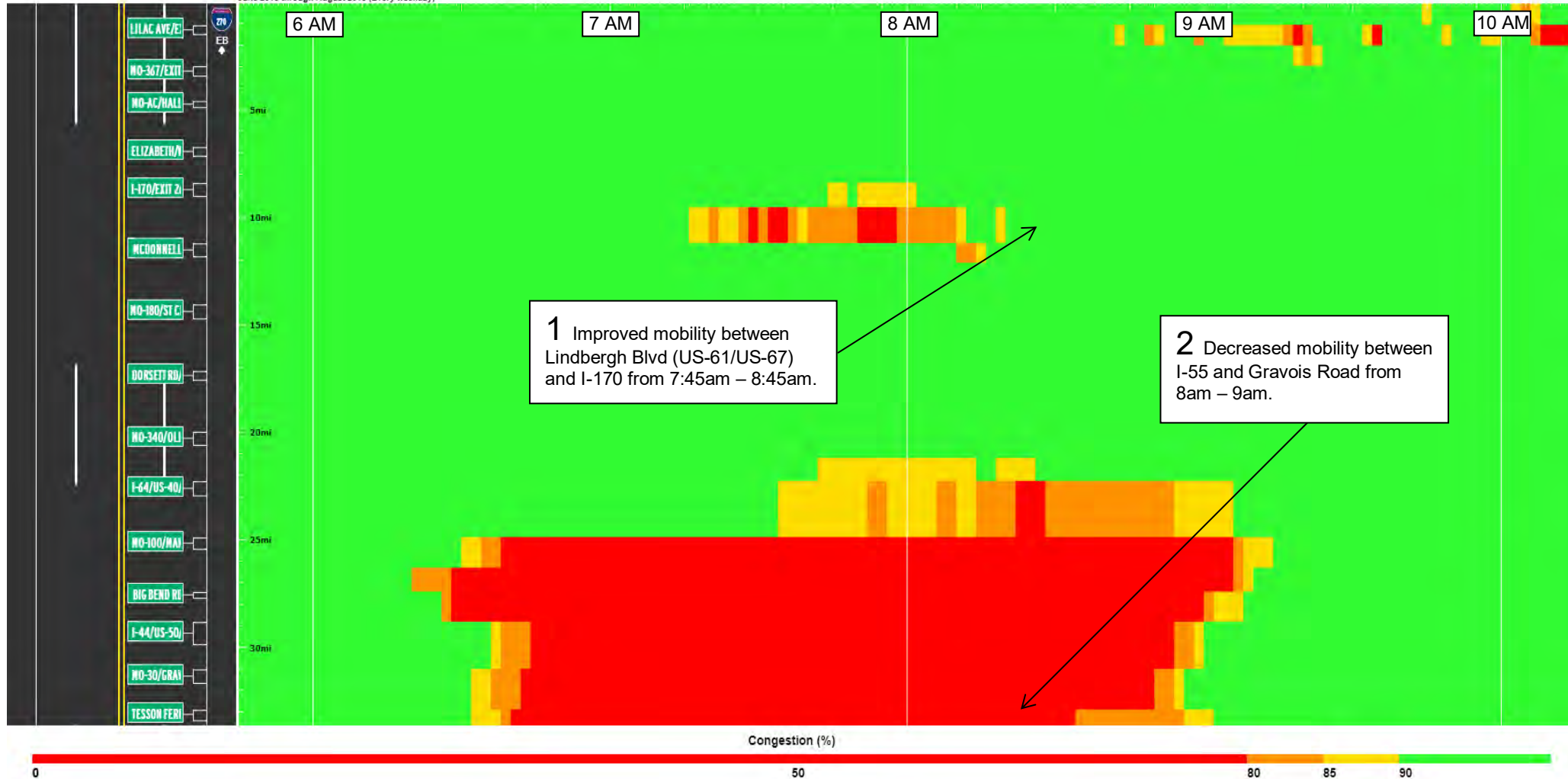
# FREEWAY MANAGEMENT

AM 2019 NB/EB I-270

Congestion for I-270 Eastbound and I-270 Northbound using HERE data

Averaged by 2 minutes for June 2019 through August 2019 (Every weekday)

June 2019 through August 2019 (Every weekday)





# FREEWAY MANAGEMENT

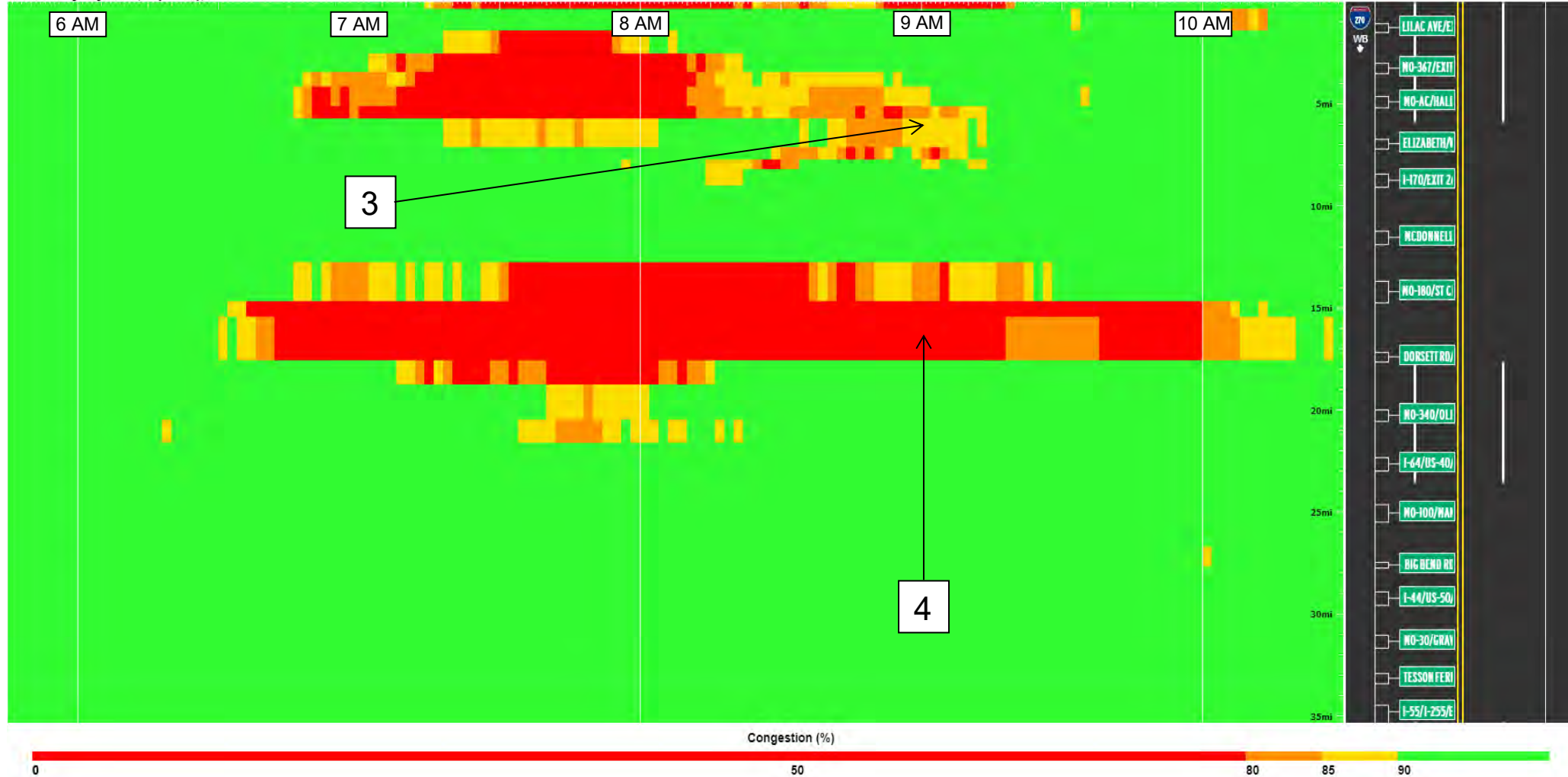
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AM 2018 SB/WB I-270

Congestion for I-270 Westbound and I-270 Southbound using HERE data

Averaged by 2 minutes for June 2018 through August 2018 (Every weekday)

June 2018 through August 2018 (Every weekday)







# FREEWAY MANAGEMENT

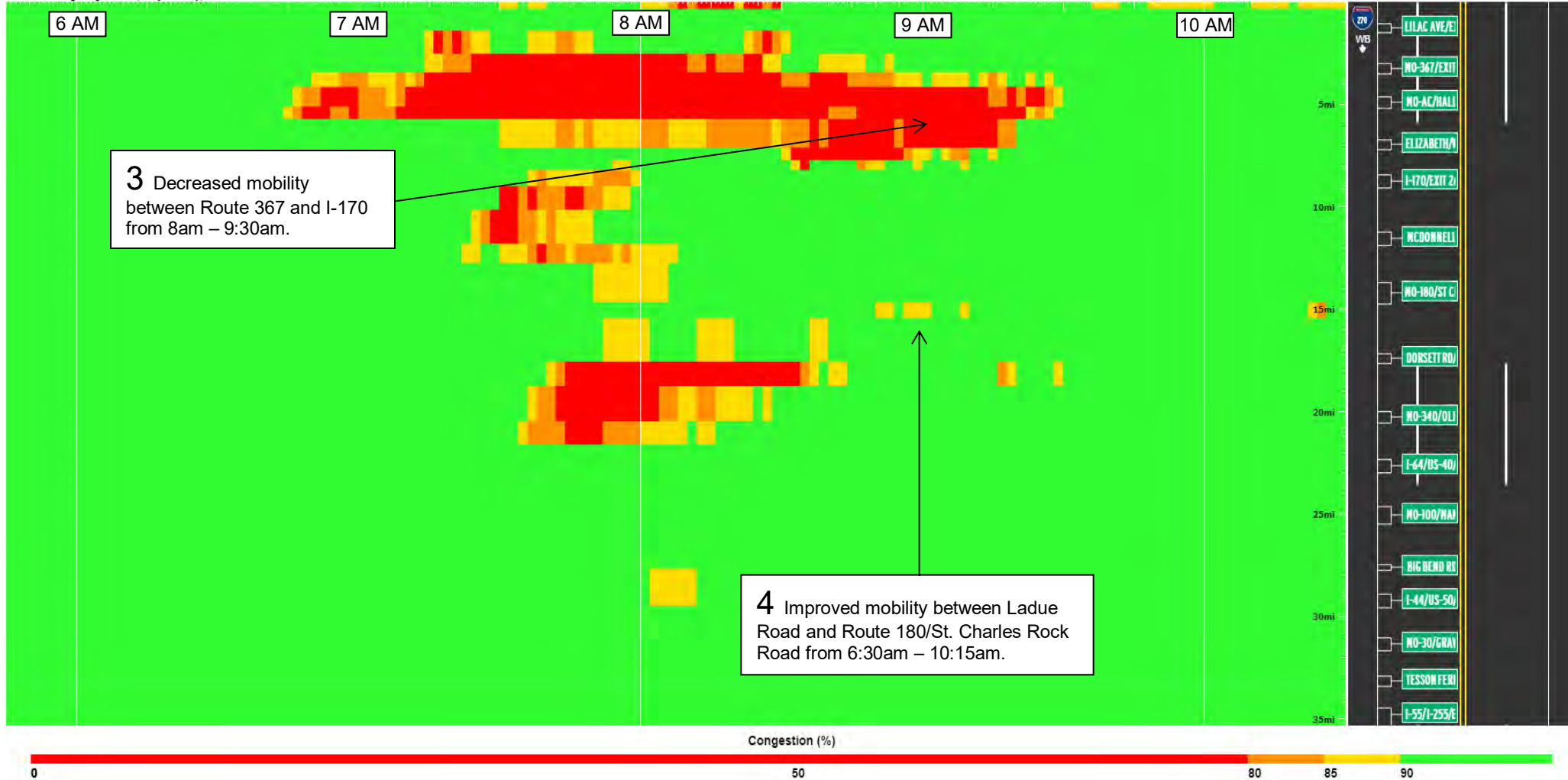
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AM 2019 SB/WB I-270

## Congestion for I-270 Westbound and I-270 Southbound using HERE data

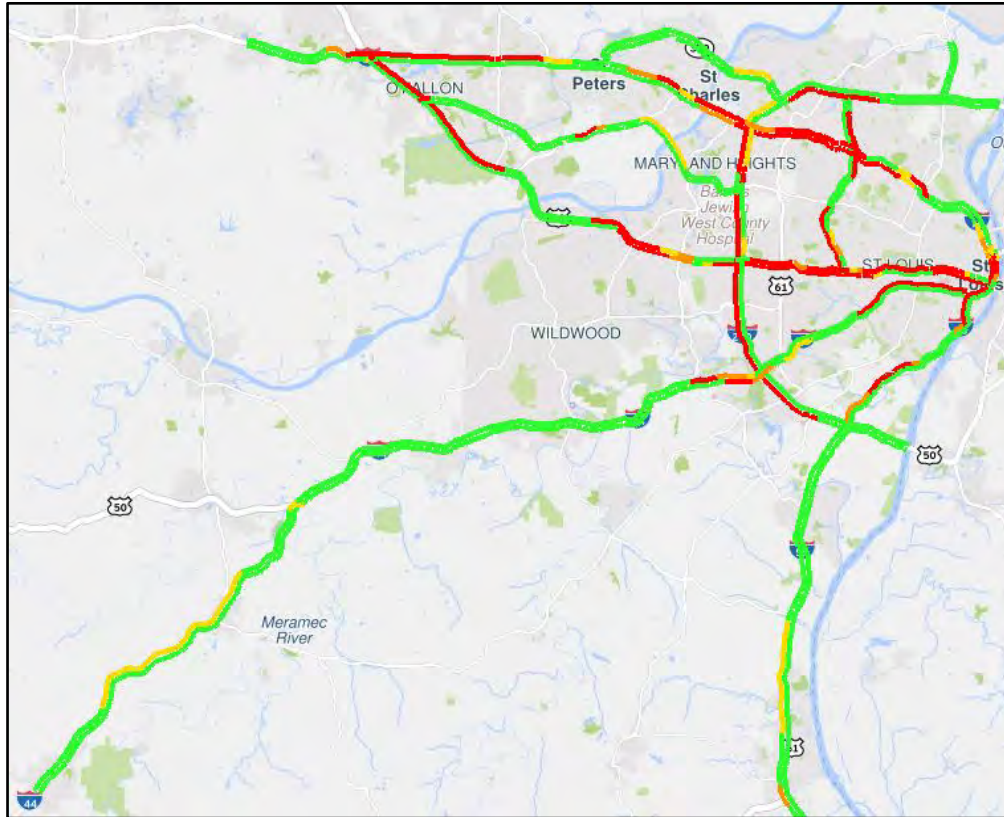
Averaged by 2 minutes for June 2019 through August 2019 (Every weekday)

June 2019 through August 2019 (Every weekday)



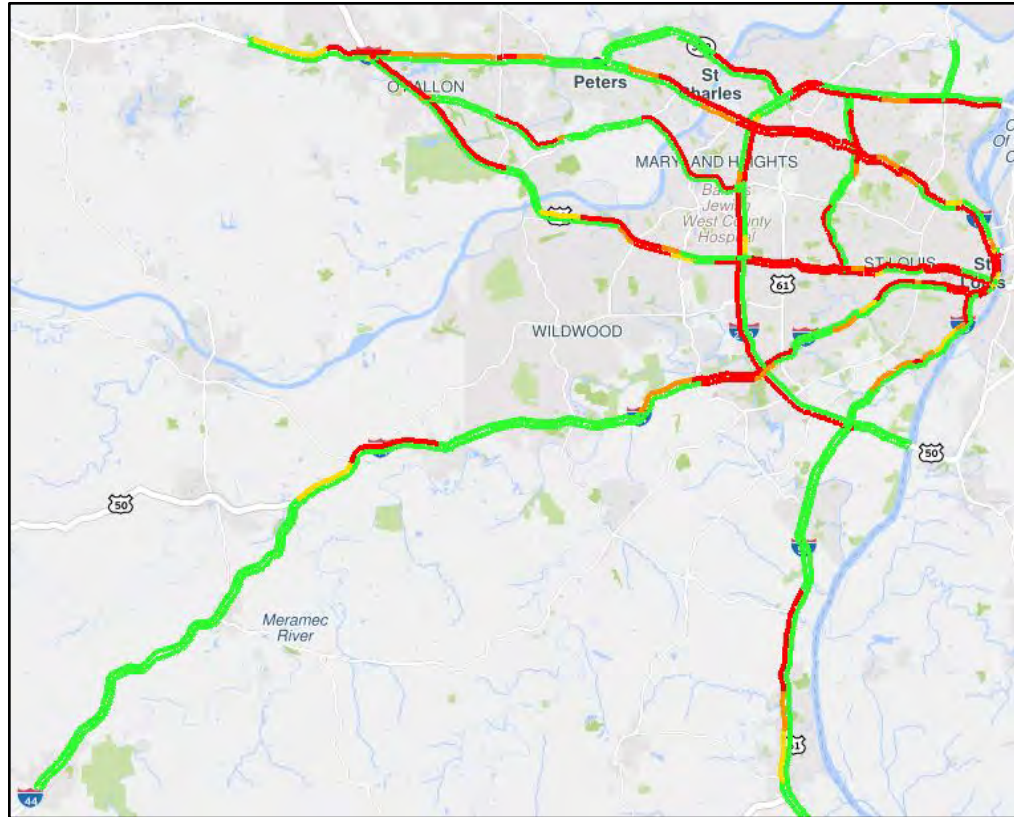
## DECREASE in Overall PM Mobility

### PM Peak Mobility June/July/August 2018 vs June/July/August 2019 \*



2018

- > 90 % of free-flow speed
- 85% - 90 % of free-flow speed
- 80 % - 85 % of free-flow speed
- < 80 % of free-flow speed



2019

#### Regional % of free-flow speed hourly breakdown\*\*:

	2018		2019
3 PM	94.9%	→	94.1%
4 PM	88.6%	→	84.8%
5 PM	86.4%	→	82.2%
6 PM	99.1%	→	97.2%

\* 5pm hour shown

\*\*Regional % of free-flow speed is the averaged % of free-flow speeds for all directions of all freeways within the St. Louis District. This provides a high-level measurement of overall regional mobility for each peak hour.



## Highlighted Corridor PM Summary I-270

### Comparing PM June/July/August 2018 vs June/July/August 2019

**PM NB/EB I-270 Overall Mobility DECREASED throughout the PM peak from 2018 → 2019 with the largest decreases occurring during the 5pm and 6pm hours.**

**PM SB/WB I-270 Overall Mobility DECREASED from 2018 → 2019, except during the 2pm hour which saw a 6.7% increase in mobility.**

### Active Work Zones During Peak PM Period

#### 2018 PM

Date	Route	Type of Work	Location	Lanes closed	Time
6/7 - 6/27	I-270	Stage 1 Construction of Bridge Rehab at Fee Fee Creek	SB I-270 between I-70 and Dorsett Inside Lanes	2 of 5	24 hours
6/13	I-270	Deck Repair	NB @ Van Talle Rd (A1033); Right lane closed	1 of 4	9:00 am to 3:00 pm
6/25	I-270	Bridge Inspection	WB I-270 Chain of Rocks Bridge	1 of 2	9:00 am to 3:00 pm
6/26	I-270	Bridge Inspection	EB I-270 Chain of Rocks Bridge	1 of 2	8:00 am to 3:00 pm
6/28- 7/1 / 7/2	I-270	Stage 1 Construction of Bridge Rehab at Fee Fee Creek	SB I-270 between I-70 and Dorsett Outside Lanes	3 of 5	24 hours
7/3-7/4	I-270	Stage 2 Construction of Bridge Rehab at Fee Fee Creek	SB I-270 between I-70 and Dorsett Inside Lanes	2 of 5	24 hours
7/5	I-270	Stage 2 Construction of Bridge Rehab at Fee Fee Creek	SB I-270 between I-70 and Dorsett Outside Lanes	3 of 5	12:00 am to 7:00pm
7/5/ 7/6-7/11	I-270	Placing Temp Traffic Barrier/Temp Striping for Stage 2 of Bridge Rehab at Fee Fee Creek	SB I-270 between I-70 and Dorsett Inside Lanes	2 of 5	24 Hours
7/12-7/18	I-270	Stage 2 Construction of Bridge Rehab at Fee Fee Creek	SB I-270 between I-70 and Dorsett Inside Lanes	2 of 5	24 hours
7/19-7/25	I-270	Stage 2 and 3 Bridge Rehabilitation at Fee Fee Creek	SB I-270 between I-70 and Dorsett Inside Lanes	2 of 5	24 hours
7/23-7/25	I-270	Stage 3 Construction of Bridge at Fee Fee Creek	NB I-270 between Dorsett and I-70 Inside Lanes	1 of 4	24 hours
7/22-7/25	I-270	Stage 3 Construction of Bridge at Fee Fee Creek	Dorsett Ramp to NB I-270	Ramp Closed	24 hours
7/26-8/1	I-270	Stage 3 Bridge Rehabilitation at Fee Fee Creek	SB and NB I-270 between I-70 and Dorsett	2 of 5	24 hours
7/26-8/1	I-270	Stage 3 Construction of Bridge at Fee Fee Creek	Dorsett Ramp to NB I-270 Closed	Ramp Closed	24 hours
8/2-8/8	I-270	Stage 3 Bridge Rehabilitation at Fee Fee Creek	SB and NB I-270 between I-70 and Dorsett	2 of 5	24 hours
8/2-8/8	I-270	Stage 3 Construction of Bridge at Fee Fee Creek	Dorsett Ramp to NB I-270 Closed	Ramp Closed	24 hours
8/6-8/8	I-270	McKelvey Bridge Panting	NB 270 Lane 1	1 of 3	24 hours
8/9-8/15	I-270	Stage 3 Bridge Rehabilitation at Fee Fee Creek	SB and NB I-270 between I-70 and Dorsett	2 of 5	24 hours
8/9-8/13	I-270	Stage 3 Construction of Bridge at Fee Fee Creek	Dorsett Ramp to NB I-270 Closed	Ramp Closed	24 hours
8/9-8/10 8/13-8-15	I-270	McKelvey Bridge Panting	NB 270 Lane 1	1 of 3	24 hours
8/16-8/17	I-270	Stage 3 Bridge Rehabilitation at Fee Fee Creek	SB I-270 between I-70 and Dorsett	2 of 5	24 hours
8/16-8/17	I-270	Stage 3 Bridge Rehabilitation at Fee Fee Creek	NB I-270 between I-70 and Dorsett	1 of 5	24 hours

#### 2019 PM

Date	Route	Type of Work	Location	Lanes closed	Time
6/14-7/20	I-270	New Concrete Ramp	270 SB to I-70 EB and WB	Ramp closed	24 hours
6/20-6/21	I-270	Bridge Inspection	RT lane on Mississippi River Bridge	1 of 2	8:00 am to 3:00 pm





# FREEWAY MANAGEMENT

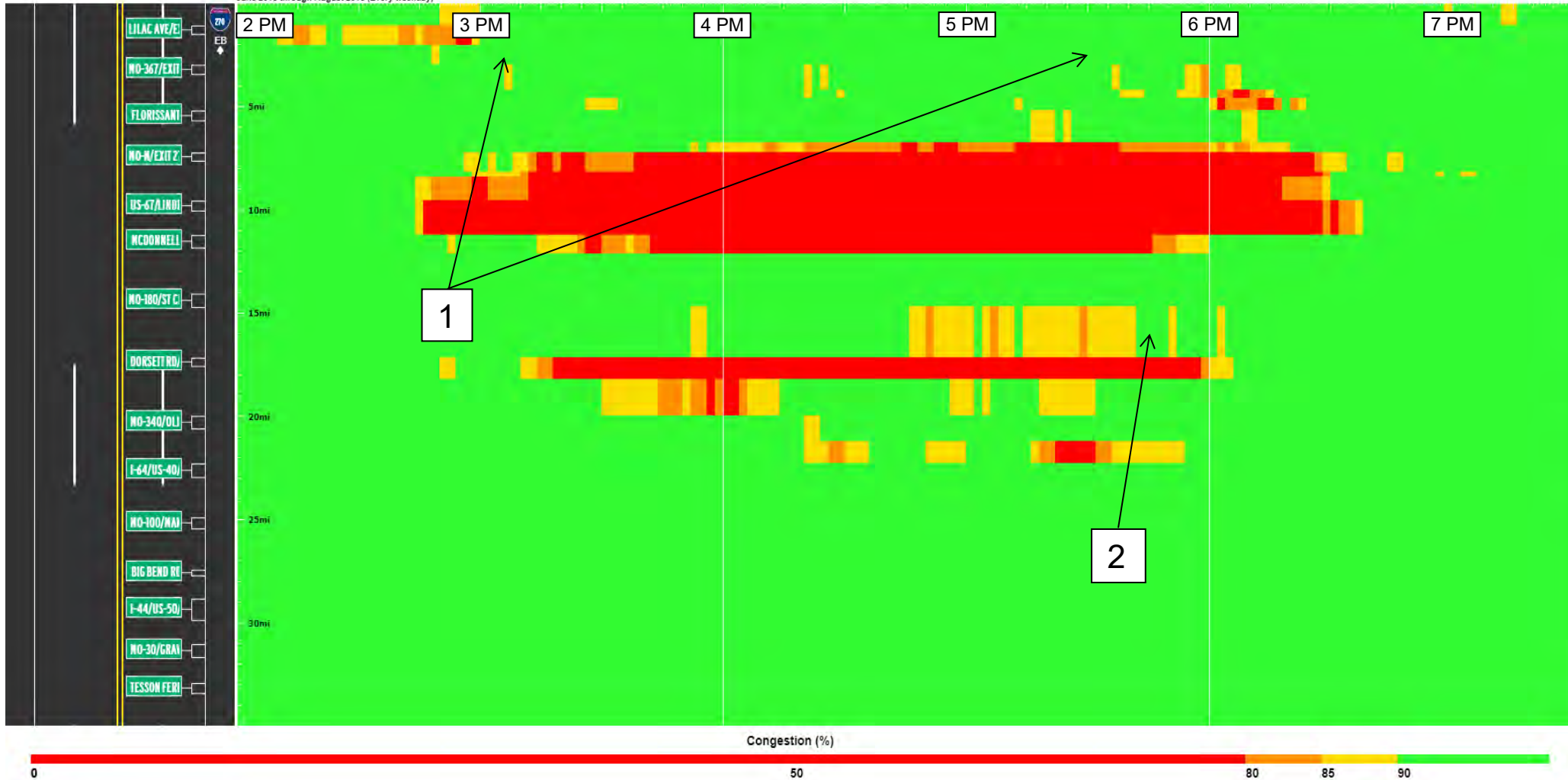
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PM 2018 NB/EB I-270

Congestion for I-270 Eastbound and I-270 Northbound using HERE data

Averaged by 2 minutes for June 2018 through August 2018 (Every weekday)

June 2018 through August 2018 (Every weekday)

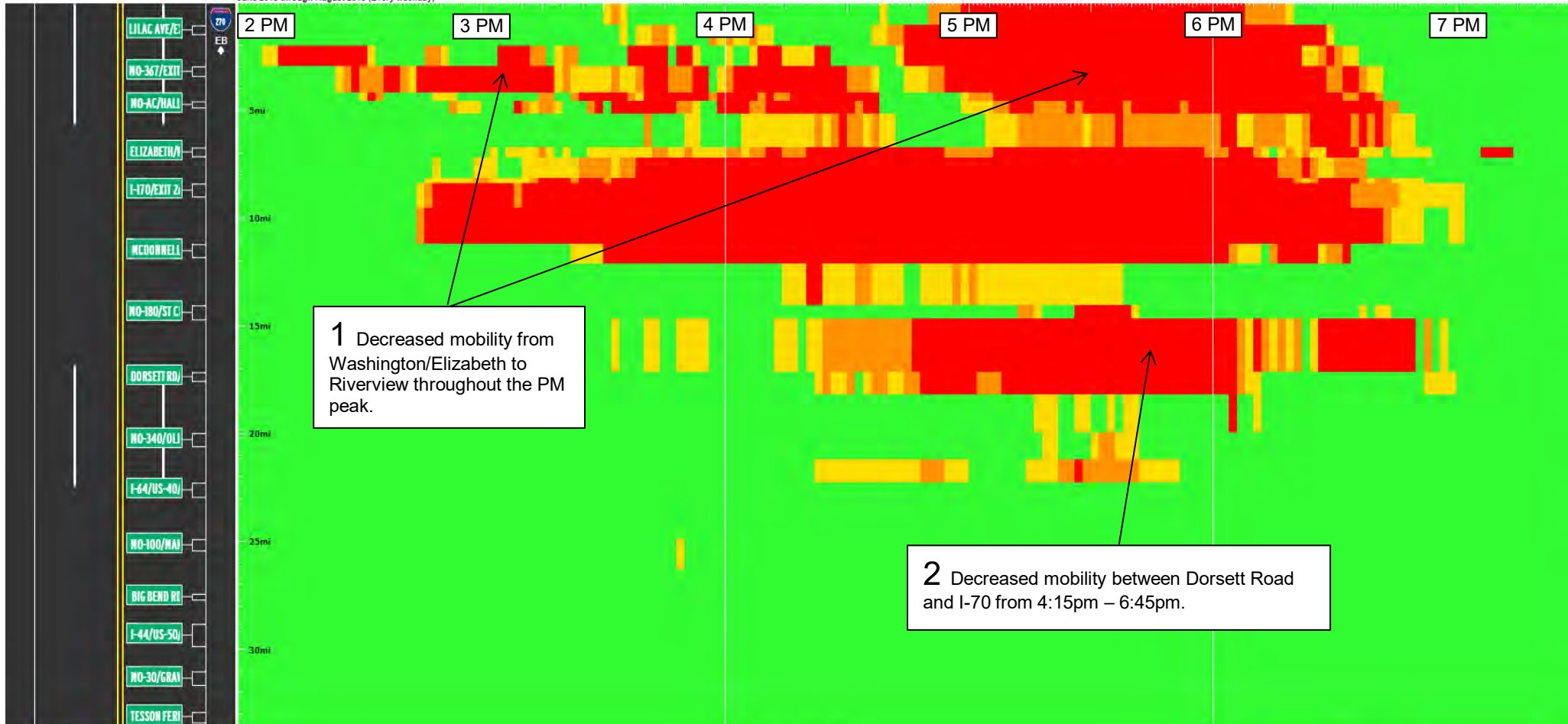


## PM 2019 NB/EB I-270

### Congestion for I-270 Eastbound and I-270 Northbound using HERE data

Averaged by 2 minutes for June 2019 through August 2019 (Every weekday)

June 2019 through August 2019 (Every weekday)



Congestion (%)

0

50

80

85

90





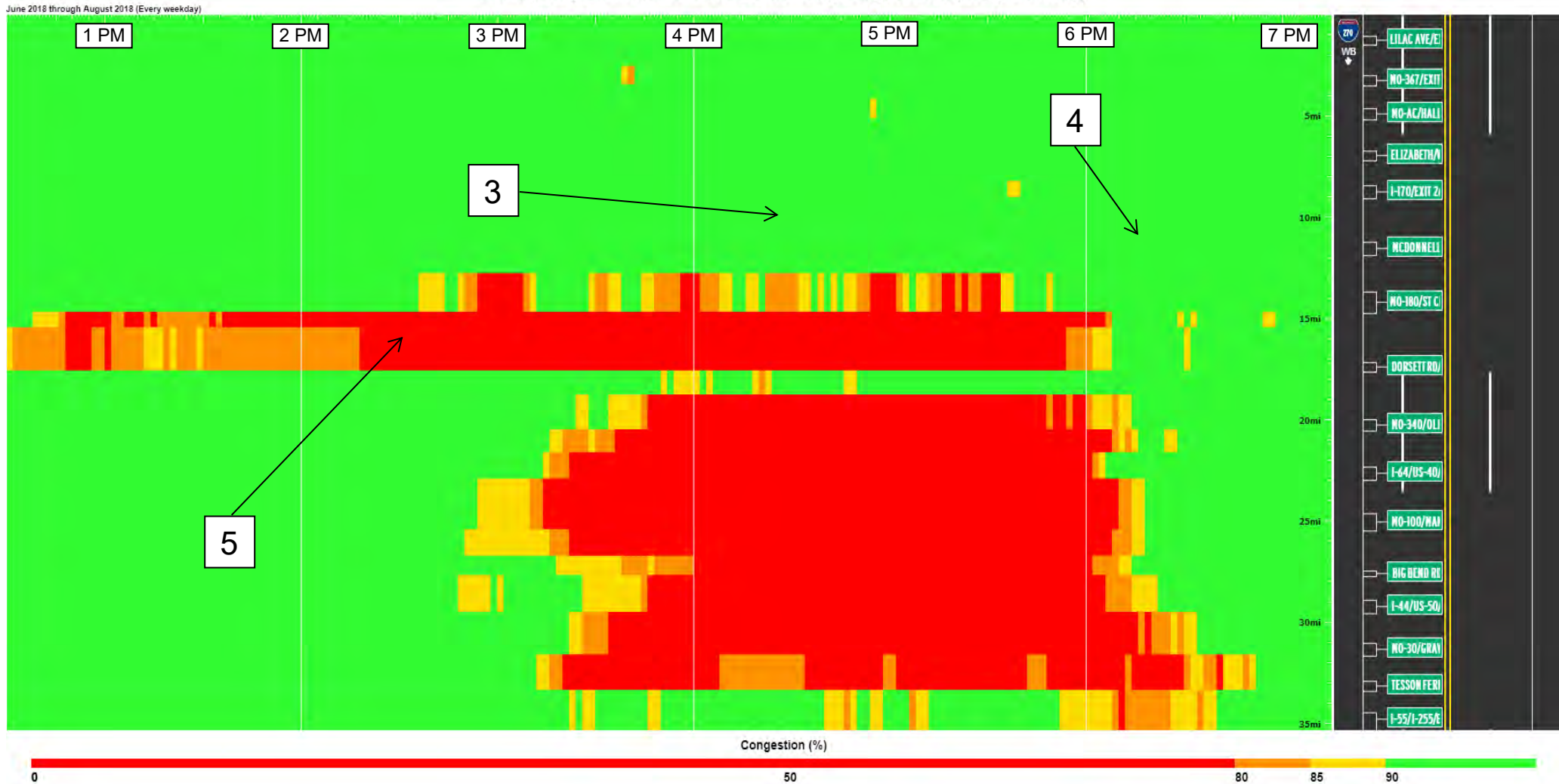
# FREEWAY MANAGEMENT

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PM 2018 SB/WB I-270

Congestion for I-270 Westbound and I-270 Southbound using HERE data

Averaged by 2 minutes for June 2018 through August 2018 (Every weekday)







# FREEWAY MANAGEMENT

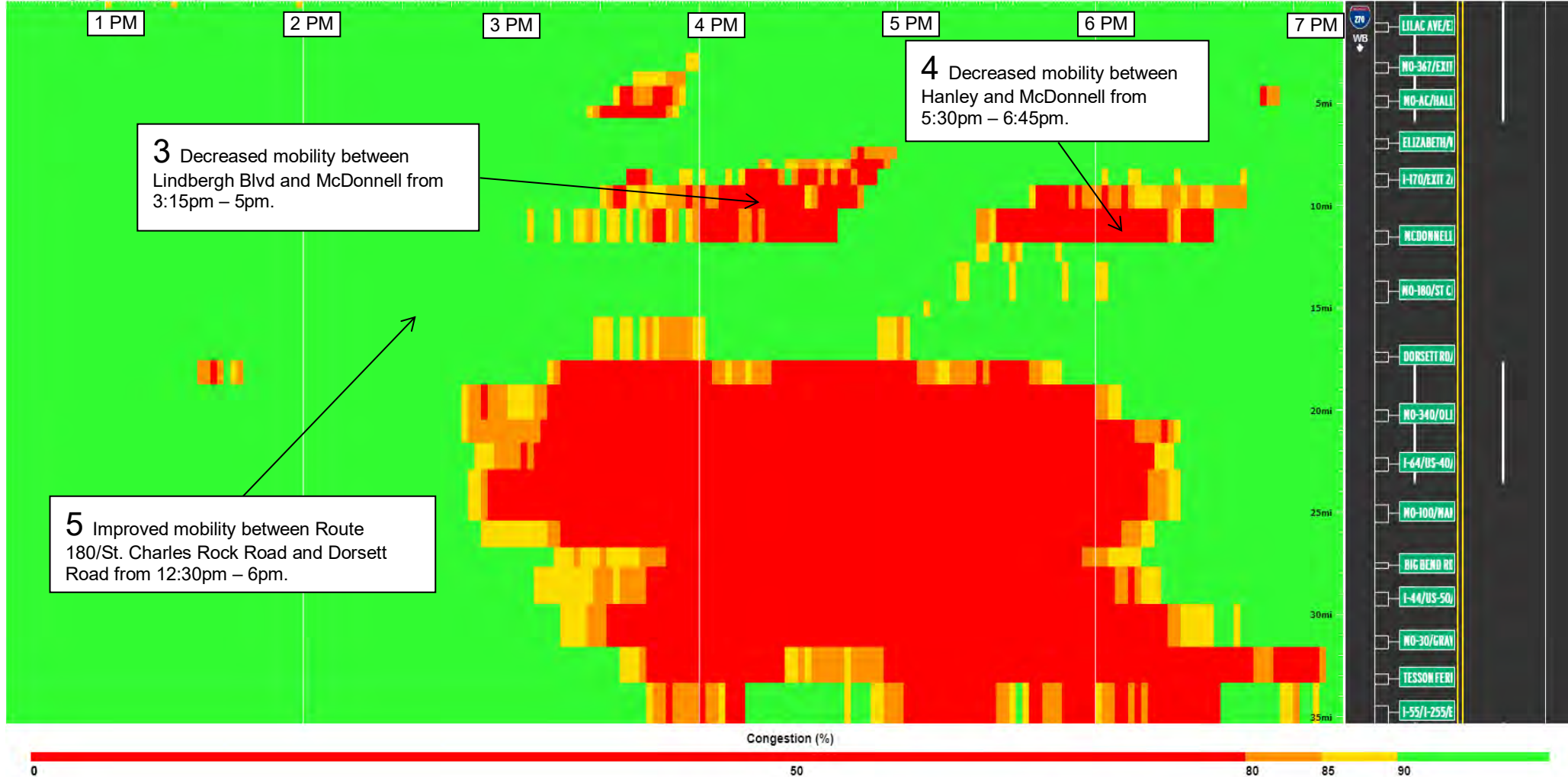
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PM 2019 SB/WB I-270

Congestion for I-270 Westbound and I-270 Southbound using HERE data

Averaged by 2 minutes for June 2019 through August 2019 (Every weekday)

June 2019 through August 2019 (Every weekday)





# WORK ZONE MANAGEMENT

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## TMC Observed Work Zones

	June 2019	July 2019	August 2019
Level of Travel Time Impact	Number of Work Zones	Number of Work Zones	Number of Work Zones
Major Impact	23	33	31
Moderate Impact	39	31	30
Minor Impact	236	238	294
Total	298	302	355



# WORK ZONE MANAGEMENT

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## Additional Travel Time Impacts through Work Zones

Major Impact (15 Minutes or Above): # Moderate Impact (10-14 Minutes): # # #

### Westbound I-44 from Jefferson to I-270

29 32

- Continued Bridge work with multiple project and daily lane closures
- All mitigation efforts were in use
- RITIS data recorded additional travel times with all delays during the AM-PM peak hours

### Eastbound I-44 from I-270 to Jefferson

10 9

- Continued Bridge work with multiple projects and daily lane closures
- All mitigation efforts were in use
- RITIS data recorded additional travel times with all delays during the AM-PM peak hours

### Eastbound I-64 PSB IDOT work 7/18 – 8/2

1 3

- Bridge work IDOT project with daily lane closures
- All mitigation efforts were in use
- RITIS data recorded additional travel times with all delays during off peak hours

### Eastbound I-255 Jefferson Barracks Bridge 8/5 – 8/18

6 5

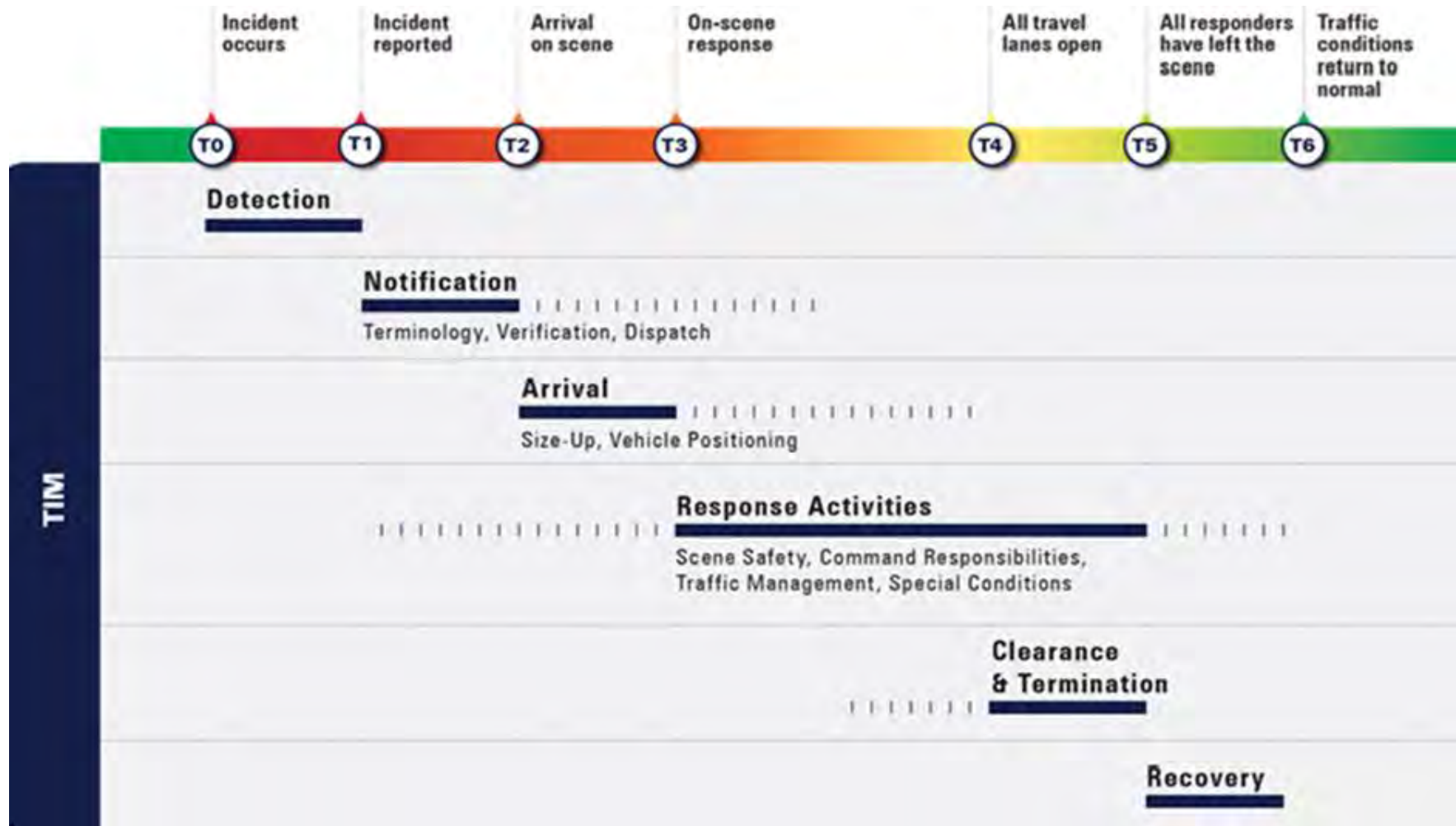
- Emergency Bridge work with daily lane closures
- All mitigation efforts were in use
- RITIS data recorded additional travel times with delays throughout the day in the beginning stages of work

### Westbound Route 370 I-270 to 5<sup>th</sup> Street

13 24

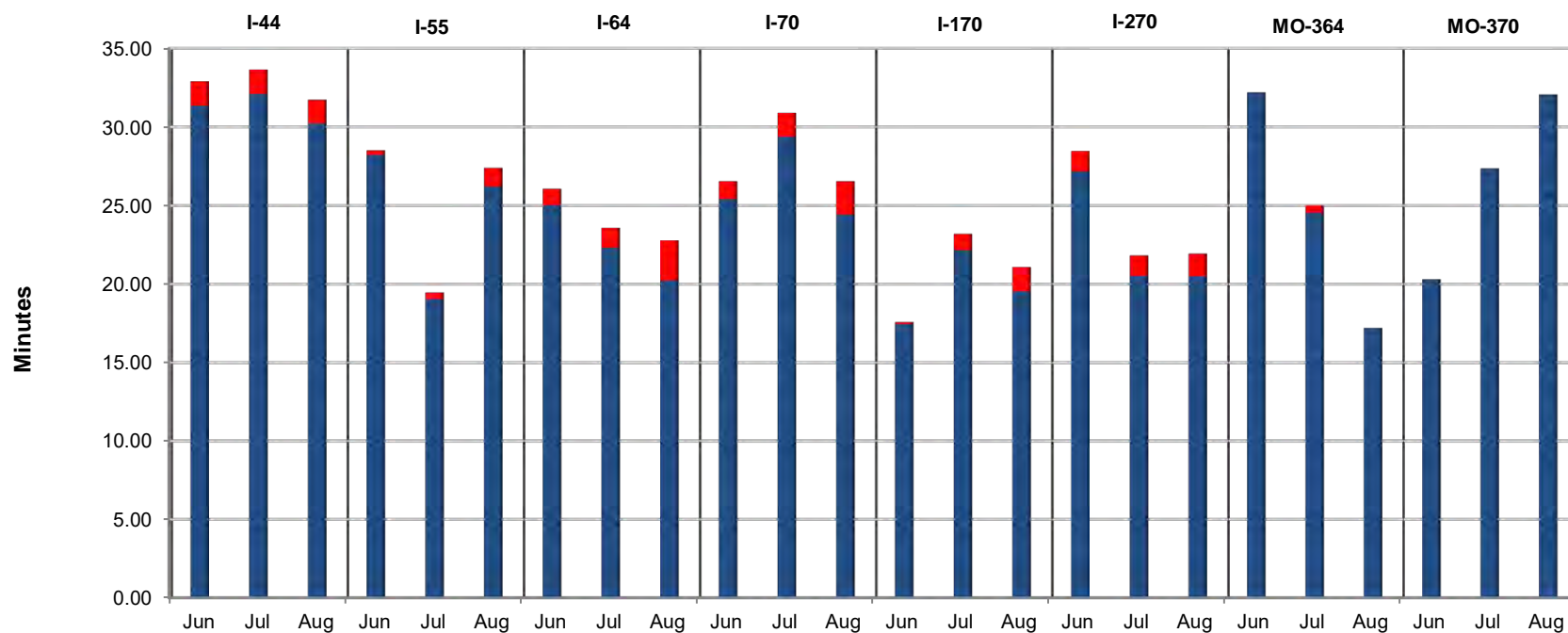
- Continued Bridge work with daily lane closures
- All mitigation efforts were in use
- RITIS data recorded additional travel times with all delays during AM and PM peak hours







June / July / August 2019  
Incidents Summary



■ Average Time for Backup to Clear = T6 - T4

■ Average Time to Clear Incident from Lanes = T4 - T1



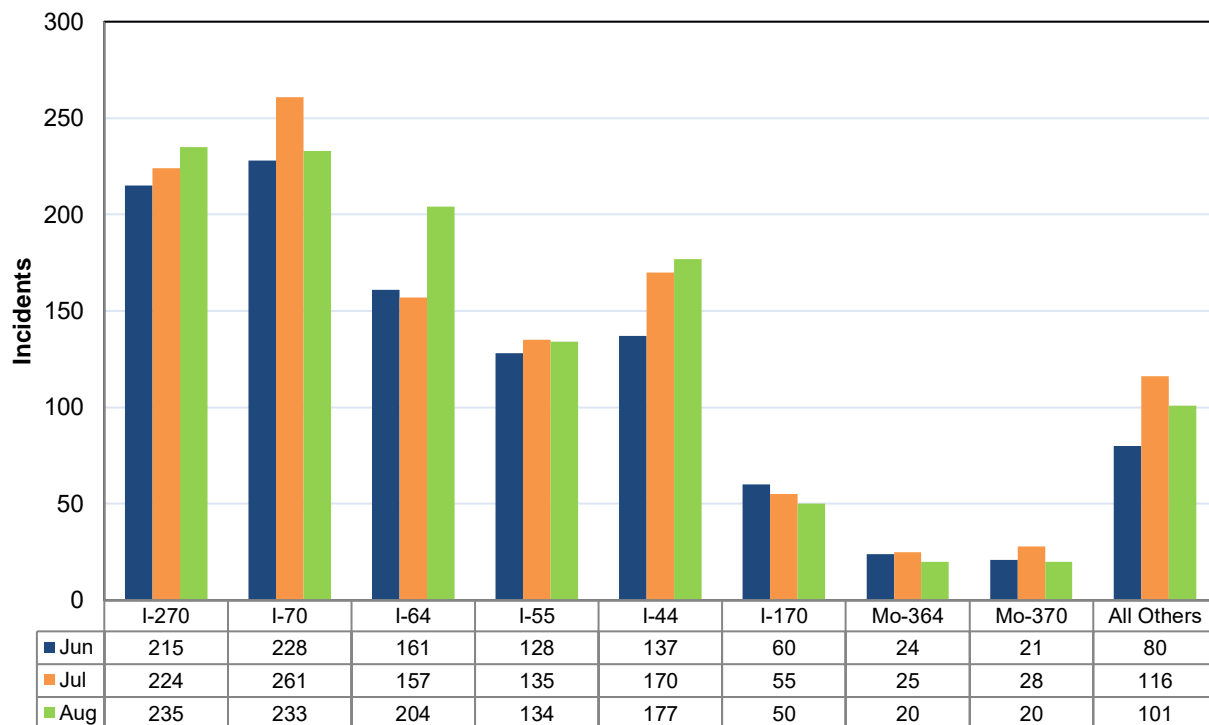
# INCIDENT MANAGEMENT

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**Total Number of Incidents: / June: 1054 / July: 1171 / August: 1174**

**Total Number of  
Lane Blocking Incidents**



## Major Impact Incidents

Jun	Jul	Aug
(1)	(2)	(1)

## Fatal Incidents

Jun	Jul	Aug
(4)	(4)	(8)

## Tractor Trailer Incidents

Jun	Jul	Aug
(61)	(81)	(70)





# INCIDENT MANAGEMENT

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## Lane Blocking Incidents by Freeway June, July and August 2019

Interstate	Month	Number of Incidents	Average Time to Clear Incident from Lanes =T4 - T1	Average Time for Backup to Clear = T6 -T4	Freeway Miles	Incidents per Mile
I-44	June	137	31:35	01:55	33	4.15
I-44	July	170	32:10	01:55	33	5.15
I-44	August	177	30:23	01:50	33	5.36
I-55	June	128	28:22	00:29	23	5.57
I-55	July	135	19:04	00:43	23	5.87
I-55	August	134	26:22	01:18	23	5.83
I-64	June	161	25:02	01:05	40	4.03
I-64	July	157	22:32	01:26	40	3.93
I-64	August	204	20:23	02:55	40	5.10
I-70	June	228	25:41	01:14	38	6.00
I-70	July	261	29:37	01:53	38	6.87
I-70	August	233	24:42	02:13	38	6.13
I-170	June	60	17:45	00:14	11	5.45
I-170	July	55	22:16	01:04	11	5.00
I-170	August	50	19:54	01:55	11	4.55
I-270	June	215	27:16	01:31	36	5.97
I-270	July	224	20:51	01:32	36	6.22
I-270	August	235	20:49	01:45	36	6.53
MO-364	June	24	32:20	00:47	11	2.18
MO-364	July	25	24:53	00:48	11	2.27
MO-364	August	20	17:21	00:00	11	1.82
MO-370	June	21	20:31	00:00	13	1.62
MO-370	July	28	27:36	00:00	13	2.15
MO-370	August	20	32:06	00:00	13	1.54
<b>Total</b>	<b>Jun/Jul/Aug</b>	<b>3102</b>	<b>24:59</b>	<b>01:11</b>	<b>615</b>	<b>5.04</b>



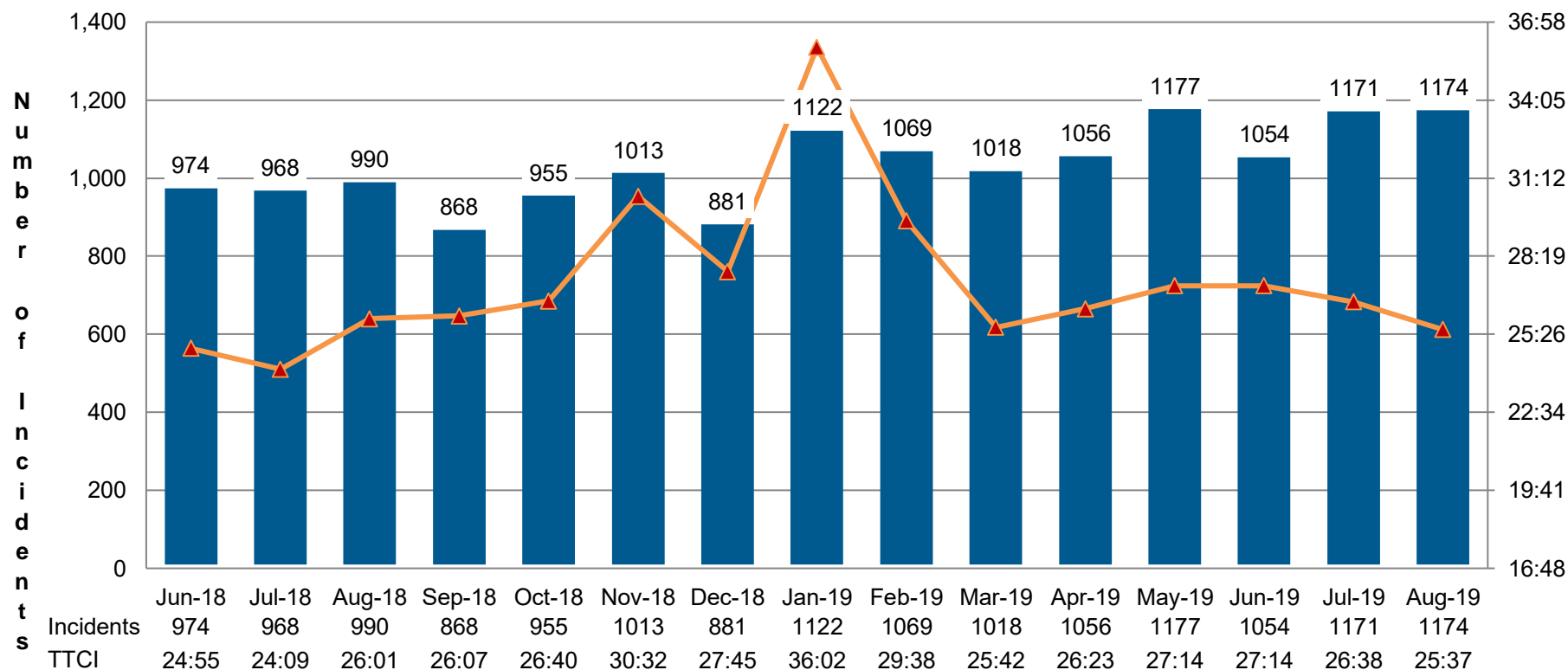
# INCIDENT MANAGEMENT

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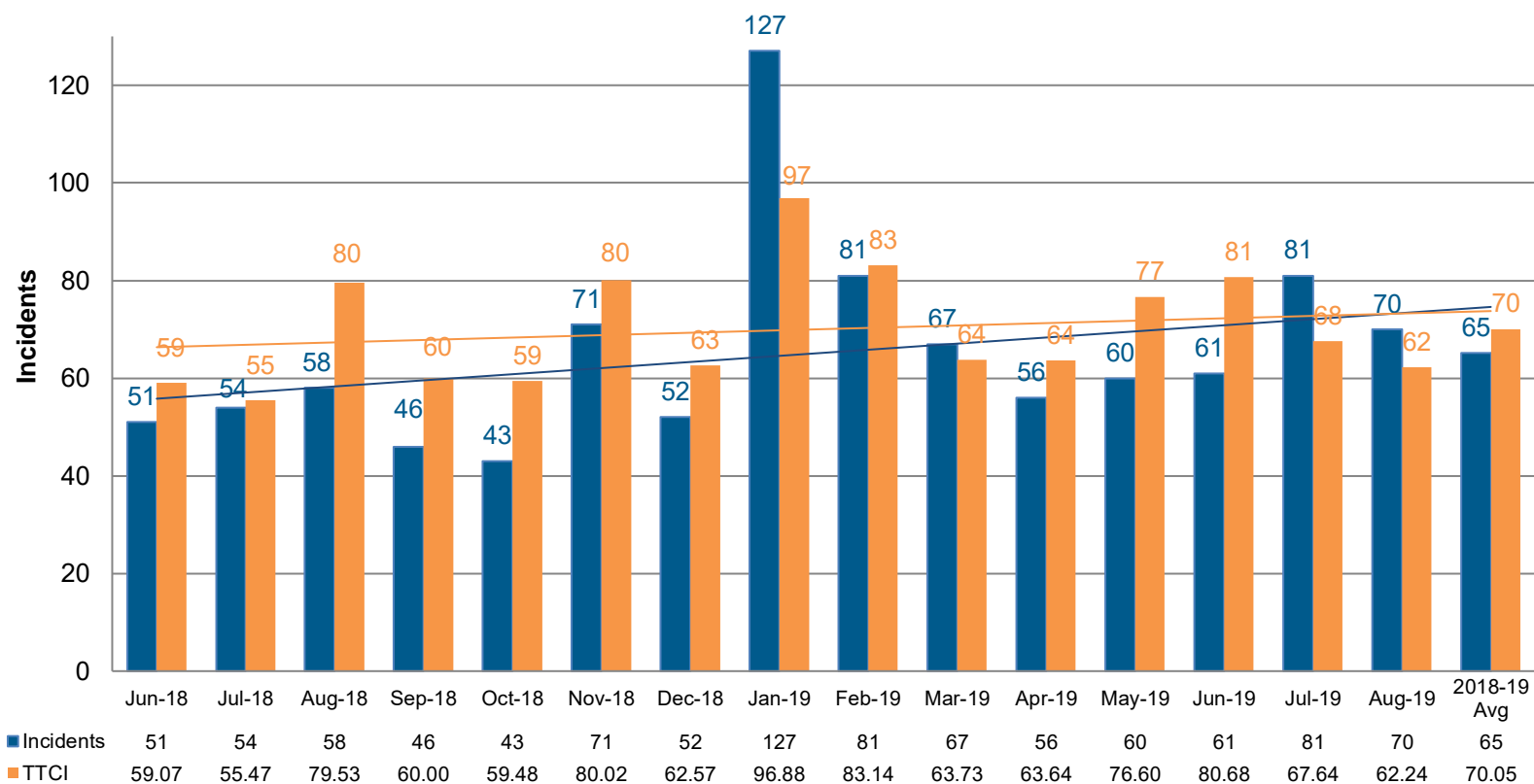
Number of Incidents and Time to Clear Lanes

Time to Clear Incidents





## 2018 – 2019 Number of Tractor Trailer Incidents / Time to Clear







# INCIDENT MANAGEMENT

ST. LOUIS DISTRICT ■ QUARTERLY REGIONAL MOBILITY REPORT ■ JUNE / JULY / AUGUST 2019

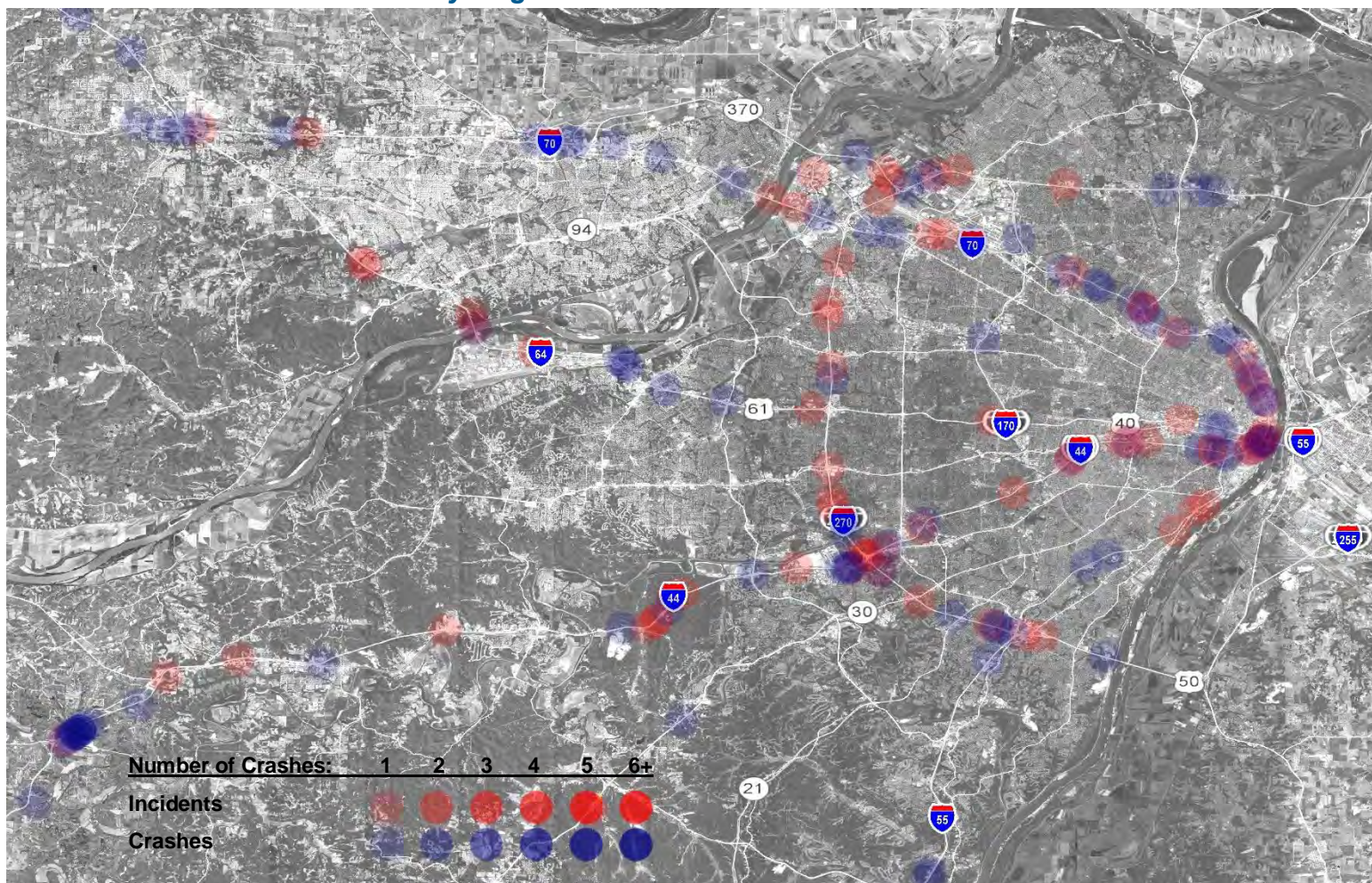


2019 Tractor Trailer Incidents by Route

2019	I-44	I-55	I-64	I-70	I-170	I-255/I-270	Route 364	Route 370	Other	Total
Jan	32	11	23	35	4	13	1	2	6	127
Feb	22	10	6	24	2	14	0	2	1	81
Mar	19	5	5	15	0	15	1	3	4	67
Apr	20	3	8	14	1	5	0	0	5	56
May	18	4	8	16	0	13	0	0	1	60
Jun	22	5	6	12	0	12	0	2	2	61
Jul	28	10	10	15	1	13	0	0	4	81
Aug	20	10	6	15	1	12	0	2	4	70
Sep										
Oct										
Nov										
Dec										
Yearly Total	181	58	72	146	9	97	2	11	27	603



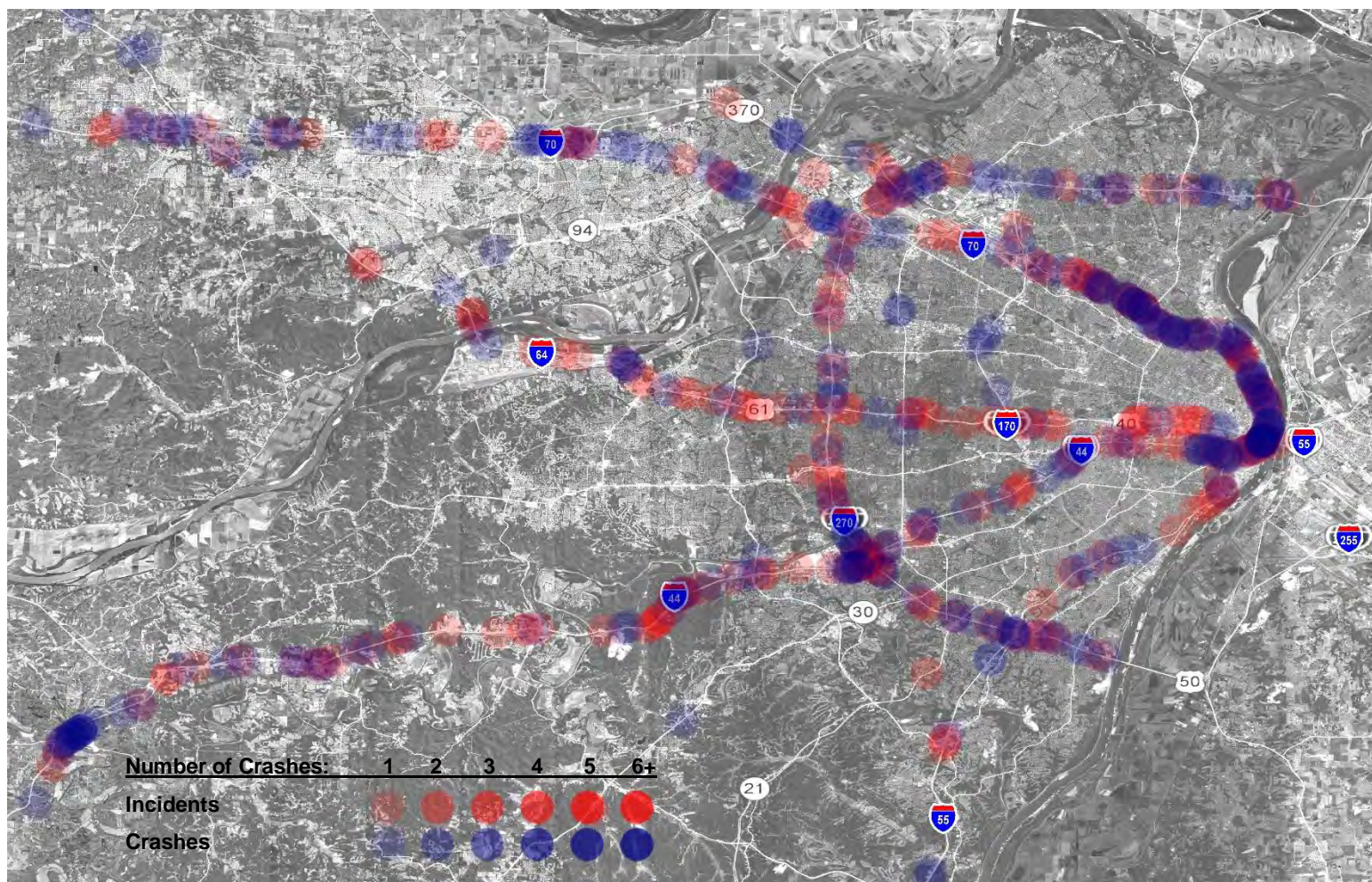
## June/July/August 2019 Tractor Trailer Incidents







*January 2019 – August 2019 Tractor Trailer Incidents Map*







# INCIDENT MANAGEMENT

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Incidents over Two Hours June / July / August 2019

Incidents in red denote high mobility impact

#	Date & Time	Day of Week	Route	Location	Description	Duration HH/MM
1	6/4/2019 15:15	Tuesday	70 OR	79 MO	Overtaken Box truck	2:08
2	6/5/2019 17:43	Wednesday	I-270 NB	PAST I-55	Overtaken tractor trailer transporting melons	5:44
3	6/5/2019 17:38	Wednesday	I-270 SB	BEFORE I-55	Overtaken tractor trailer transporting melons	6:00
4	6/5/2019 18:34	Wednesday	I-70 EB	PAST CYPRESS RD	Tractor trailer with air brake issue awaiting tow	2:56
5	6/7/2019 10:33	Friday	180 MO	N SALERNO DR CST	Crash with downed power lines	3:14
6	6/8/2019 1:54	Saturday	I-44 WB	PAST EXIT 225 MO 185/ROUTE D/SULLIVAN	Fatal crash SUV vs tractor trailer with 3 ejections reconstruction	2:45
7	6/8/2019 7:54	Saturday	I-44 EB	PAST JAMIESON AVE	Overtaken tractor trailer carrying food products	2:20
8	6/8/2019 7:56	Saturday	I-44 WB	PAST ARSENAL ST	Truck was on median wall gas line ruptured	2:18
9	6/10/2019 10:17	Monday	I-64 EB	PAST BOONES CROSSING	Dump truck carrying a load of dirt caught fire	3:13
10	6/10/2019 10:14	Monday	I-64 WB	PAST CHESTERFIELD W	Dump truck carrying a load of dirt caught fire	3:08
11	6/13/2019 7:21	Thursday	I-55 NB	ON RAMP FROM US 61	Overtaken tractor trailer that had to be unloaded	9:04
12	6/14/2019 1:08	Friday	I-44 WB	AT JEFFERSON AVE	Tractor trailer with mechanical issue	2:06
13	6/14/2019 19:37	Friday	I-64 WB	BEFORE MC KNIGHT RD	Stalled vehicle with mechanical and tire issues	3:10
14	6/19/2019 13:44	Wednesday	I-270 EB	AT BELLEFONTAINE RD	Multi-vehicle crash with injuries and state damage	3:27
15	6/19/2019 14:36	Wednesday	I-270 SB	BEFORE DORSETT RD	Tractor trailer crash with 150 gallon diesel spill	3:14
16	6/20/2019 22:31	Thursday	I-70 WB	BEFORE GRAND AVE	Multiple vehicle crash in work zone with injuries	2:00
17	6/21/2019 10:47	Friday	I-55 NB	TO ARSENAL ST	Single vehicle injury crash	2:16
18	6/21/2019 12:40	Friday	I-44 WB	BEFORE US 50	Two tractor trailer crash with battery acid spill	5:00
19	6/24/2019 14:52	Monday	I-70 EB	PAST ROUTE TW	Tractor trailer crash into guard cable	2:42
20	6/28/2019 0:45	Friday	I-44 EB	AT ROUTE O	Multi-vehicle crash with tractor trailer down embankment and guard rail all over lanes	3:05



# INCIDENT MANAGEMENT

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#	Date & Time	Day of Week	Route	Location	Description	Duration HH/MM
21	7/1/2019 6:59	Monday	US 67 SB	BEFORE LINDBERGH BLVD	Multiple vehicle fatal crash	4:15
22	7/1/2019 18:45	Monday	I-70 WB	TO SHREVE AVE	Tractor trailer crash with spilled load on overpass	3:46
23	7/2/2019 21:19	Tuesday	WATSON RD CST	GENERAL GRANT LN CST	Large pothole required immediate maintenance	3:30
24	7/5/2019 6:03	Friday	I-70 WB	BEFORE KINGSHIGHWAY	Tractor trailer with locked up brakes	2:42
25	7/5/2019 18:58	Friday	I-44 WB	AT MO 141	Fatal crash with reconstruction	2:24
26	7/8/2019 22:38	Monday	I-64 EB	AT MISSISSIPPI RIVER	Crash with injuries on bridge	2:01
27	7/9/2019 22:05	Tuesday	180 MO	OGDEN AVE CST	Pavement buckled delayed response with ER tied up on another incident	2:05
28	7/10/2019 3:13	Wednesday	US 67 SB	AT ROTT RD	Single vehicle fatal crash into bank with police investigation	3:22
29	7/10/2019 12:51	Wednesday	I-70 EB	ON RAMP FROM MO 79	Overturned cement truck	2:40
30	7/10/2019 15:53	Wednesday	I-44 WB	PAST BUS 44 SIX FLAGS RD	Multiple vehicles with flat tires after running over metal object in the roadway	3:12
31	7/10/2019 17:27	Wednesday	I-70 WB	PAST JENNINGS STA RD	Police investigation for shooting after medical emergency on roadway / shell casing evidence	2:46
32	7/10/2019 17:44	Wednesday	I-70 WB	AT GOODFELLOW	Police investigation to recover shell casings	2:32
33	7/10/2019 18:02	Wednesday	I-70 WB	TO GOODFELLOW BLVD	Police investigation to recover shell casings	2:13
34	7/11/2019 9:05	Thursday	I-70 WB	AT I-170	Clean up of one foot of mud on roadway	2:30
35	7/12/2019 0:35	Friday	I-70 WB	PAST UNION	Multiple vehicle fatal crash with reconstruction	5:26
36	7/12/2019 0:44	Friday	I-70 WB	ON RAMP FROM STRATFORD AVE	Police closed ramp for reconstruction	5:18
37	7/12/2019 5:52	Friday	MO 370 EB	AT MO 94	Large pothole needing immediate repairs	4:39
38	7/13/2019 4:55	Saturday	I-70 WB	AT ST CHARLES ROCK RD	Box truck crash in ditch behind guardrail	3:10
39	7/15/2019 11:12	Monday	I-44 EB	PAST ROUTE O	Overturned tractor trailer	2:43
40	7/16/2019 5:46	Tuesday	I-170 SB	TO SCUDDER AVE	Stalled tractor trailer with diesel fuel leak	3:12



# INCIDENT MANAGEMENT

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#	Date & Time	Day of Week	Route	Location	Description	Duration HH/MM
41	7/16/2019 16:47	Tuesday	I-55 SB	PAST ROUTE Z	Single vehicle tractor trailer crash	4:14
42	7/17/2019 21:18	Wednesday	DD RT	I-64 EB	Tree blocking lanes ER on incident caused delayed response	3:04
43	7/17/2019 21:22	Wednesday	I-64 WB	PAST ROUTE K	Overtaken tractor trailer into guard cable barrier	2:46
44	7/22/2019 3:17	Monday	I-44 EB	PAST ROUTE O	Multi-vehicle crash with overturned tractor trailer	3:15
45	7/22/2019 3:18	Monday	I-44 WB	BEFORE US 50	Police responded to multi-vehicle crash in opposing direction	2:47
46	7/22/2019 11:03	Monday	I-44 WB	BEFORE SHREWSBURY AVE	Pickup vs. tractor trailer that overturned	2:49
47	7/25/2019 10:07	Thursday	N U RT	S I-70 WB RP	Police investigation for a shooting at gas station	2:15
48	7/28/2019 2:40	Sunday	I-44 WB	BEFORE MO 185 S	Tractor trailer hauling produce load compromised	3:00
49	7/28/2019 2:41	Sunday	I-44 EB	PAST ROUTE AF/MO 185 S	Median wall debris in lanes from tractor trailer crash into median wall in west bound direction	7:35
50	7/28/2019 6:29	Sunday	I-64 EB	PAST HANLEY RD	Greyhound bus broke down passengers transferred to second bus	2:34
51	7/28/2019 12:54	Sunday	I-44 EB	AT ROUTE AF/MO 185 S	Multi-vehicle crash with multiple injuries	2:07
52	7/28/2019 22:15	Sunday	I-270 SB	BEFORE MO 370	Vehicle crashed into abandoned vehicle on shoulder causing multiple vehicle crash	2:09
53	7/31/2019 3:56	Wednesday	US 67 NB	PAST ROUTE V	Overtaken grain truck on ramp	5:38
54	8/5/2019 11:39	Monday	MO 30 WB	PAST ROCK CREEK RD	Overtaken fatal tractor trailer crash	5:18
55	8/6/2019 5:53	Tuesday	I-70 EB	PAST WENTZVILLE PKWY	Pickup vs. tractor trailer fatal crash with reconstruction	4:10
56	8/7/2019 16:29	Wednesday	I-70 WB	BEFORE RIVERVIEW	Crash caused by fatal shooting with vehicle fire and median wall damage	2:35
57	8/11/2019 7:16	Sunday	ROUTE 100 EB MO	T RT	Motorcycle vs. SUV fatal crash with reconstruction	2:17
58	8/12/2019 18:43	Monday	MANCHESTER RD EB	BEFORE I-270/DES PERES RD	Pavement buckled lane closed until decision to have on call fix in am was made	2:23





# INCIDENT MANAGEMENT

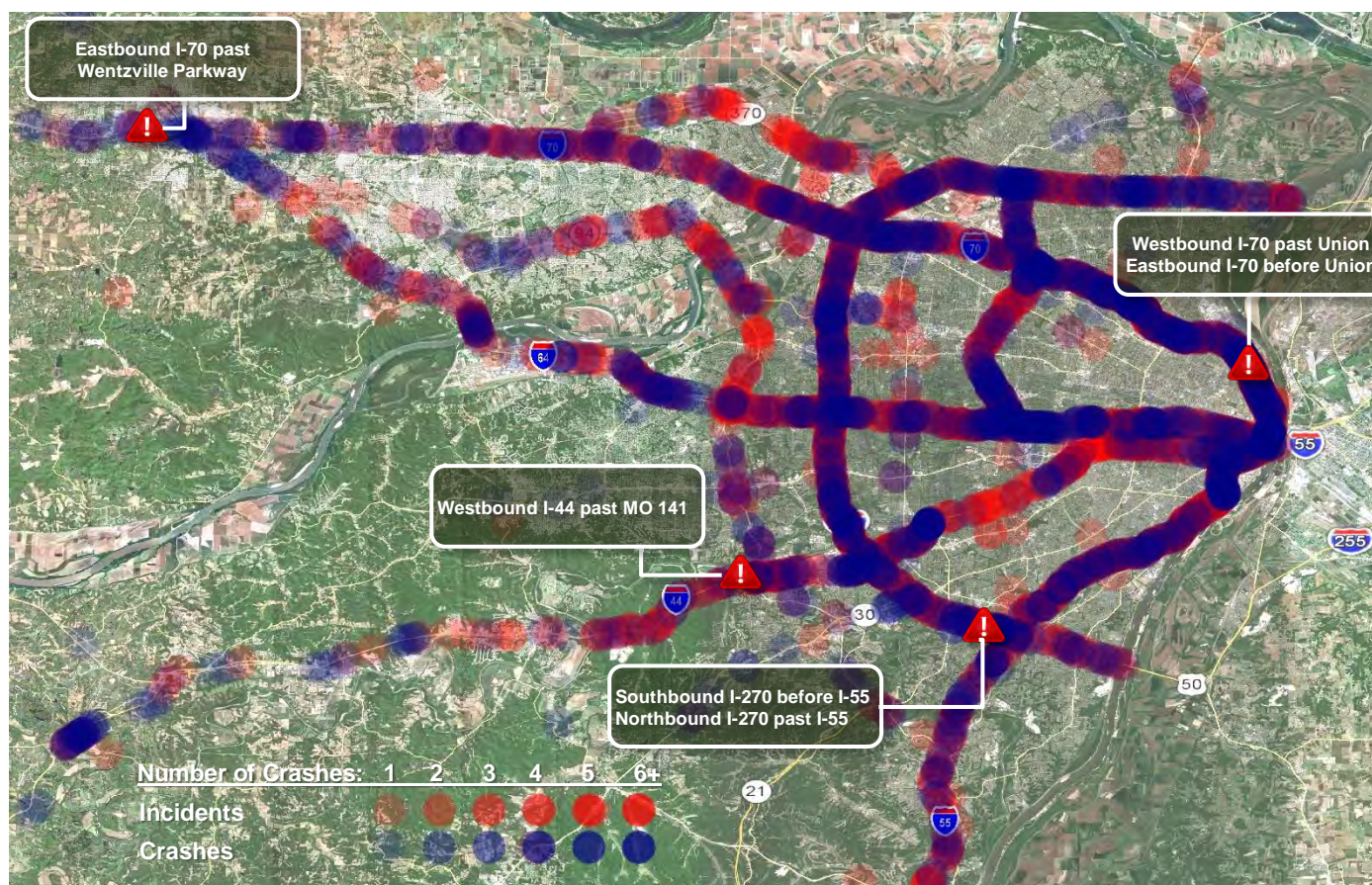
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#	Date & Time	Day of Week	Route	Location	Description	Duration HH/MM
59	8/18/2019 18:31	Sunday	I-55 SB	BEFORE RICHARDSON RD	Box truck carrying trailer had tire come off	3:14
60	8/18/2019 23:09	Sunday	I-44 EB	AT ROUTE AF/MO 185 S	Two-vehicle fatal crash with injuries reconstruction	2:20
61	8/20/2019 4:24	Tuesday	I-55 SB	PAST US 61	Multi-vehicle crash pickup and two tractor trailers into guard cable barrier with injuries	2:35
62	8/21/2019 21:21	Wednesday	MO 141 NB	AT I-44	Roadway flooded with vehicles stranded	3:52
63	8/21/2019 21:23	Wednesday	MO 141 SB	AT I-44	Roadway flooded with vehicles stranded	3:22
64	8/22/2019 1:58	Thursday	I-44 EB	ON RAMP FROM GRAVOIS AVE	Pickup trucks engine dropped before it could be towed a second tow was dispatched	2:17
65	8/22/2019 16:01	Thursday	MO 370 WB	PAST ST LOUIS MILLS BLVD	Large highway signed knocked down in lane	4:09
66	8/23/2019 11:17	Friday	I-55 NB	PAST EXIT 80 MO 77 BENTON/DIEHISTADT AT MM 83.2	Tractor trailer crash with vehicle behind guardrail	2:56
67	8/24/2019 4:09	Saturday	I-70 WB	AT WEST FLORISSANT	Hit and run crash awaiting on city tow shift change	2:02
68	8/28/2019 11:46	Wednesday	I-44 WB	BEFORE US 50 WEST/UNION JEFFERSON CITY	Tractor trailer crashed and ended up on guardrail	2:39
69	8/29/2019 11:46	Thursday	I-44 WB	BEFORE HAMPTON AVE	Vehicle fire with tire change	2:35
70	8/29/2019 23:32	Thursday	S 61 US	Himmel road	Fatal pedestrian strike involving 3 tractor trailers	3:11
71	8/30/2019 17:39	Friday	MO 141 SB	AT I-44	Roadway flooded	2:45
72	8/30/2019 22:50	Friday	I-44 WB	BEFORE BIG BEND BLVD	Multi-vehicle fatal crash with reconstruction	4:32



June/July/August 2019 Incidents with Mobility Impact Map



! Denotes Location of Major Impact Traffic Incidents





# INCIDENT MANAGEMENT

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## Major Impact Traffic Incidents and Mitigation

### 6/5/2019 (Wednesday)

- **Time:** 5:38 pm – 11:38 pm
- **Location:** St. Louis County – Southbound I-270 before I-55 / Northbound I-270 past I-55
- **Event:** Two-Vehicle Crash
- **Estimated Initial Impact:** Rush Hour: 4 of 5 SB travel lanes affected equals (=) 80% / 3 of 6 NB travel lanes affected equals (=) 50%
- **Incident Details:** TMC operators heard the crash being dispatched while monitoring scanner radio traffic. Using CCTV, they confirmed the location of the crash, which involved an overturned tractor trailer and a Jeep SUV. The tractor trailer was traveling south when the right side of the tractor portion of the vehicle struck the left side of the Jeep. This impact ripped the front left wheel off the Jeep, which came to a stop in the #3 southbound lane. The tractor trailer then traveled off the left side of the roadway where it struck the median barrier wall. The force of this impact caused the trailer it was hauling to flip over the wall landing on its side in the northbound left lanes. Before coming to a stop, the top of the trailer was ripped open, partially spilling the load of watermelons it was carrying onto the highway. The tractor remained attached and came to a rest on its left side partially on top of the median. Besides spilling the load of watermelons onto the northbound lanes, emergency responders also had to address oil and coolant that spilled onto the southbound lanes from the tractor.
- **Action:** St. Louis County Police and Mehlville Fire and EMS responded. The TMC entered the incident into ATMS and activated available DMS boards. The ATMS entry also auto-populated an entry into the TMS system alerting the public of the lane closures. The TMC dispatched multiple MoDOT Emergency Responders to the area to assist with traffic control. The maintenance superintendent for that area was notified approximately 30 minutes into the incident due to the ripped open trailer and melons all over the roadway and he sent out a unit to assist with cleanup. CBB was contacted and adjusted signals on US 67 to assist with flow of extra traffic using that route to avoid the backup on I-270. Oil dry was used to soak up the fluid spills. Traffic queued 7 miles on Southbound I-270 and 2 miles on Northbound I-270. Duration was extended due to the fact the watermelons had to be unloaded from the trailer before it could be up-righted. Further, the tractor portion had to be lifted off the median wall, which added more time to the cleanup efforts.
- **Event Duration:** 6 hours 0 minutes






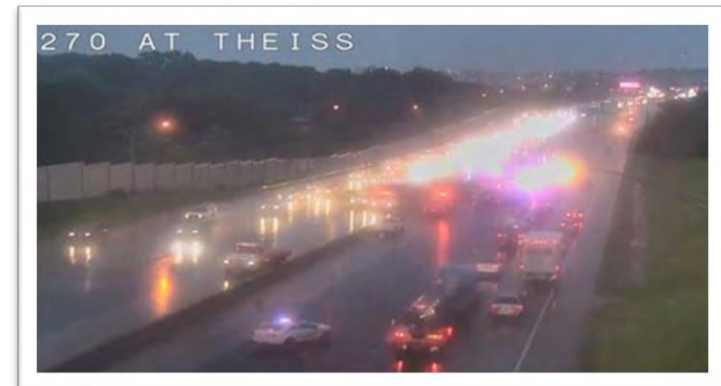
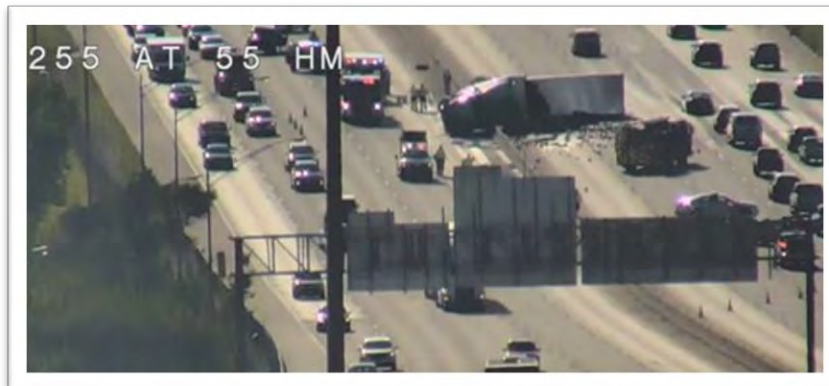
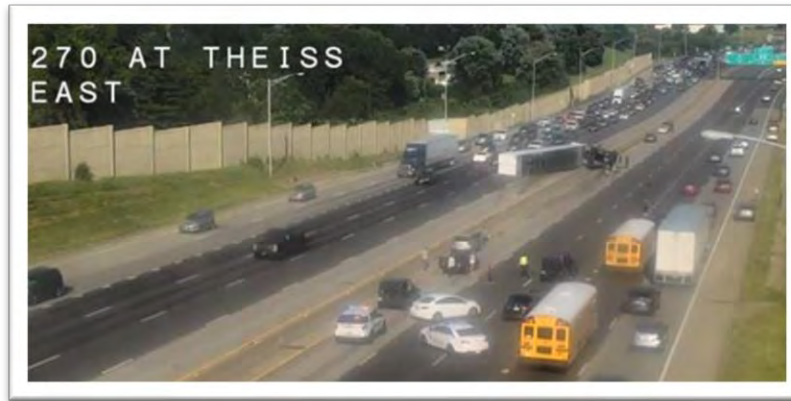
# INCIDENT MANAGEMENT

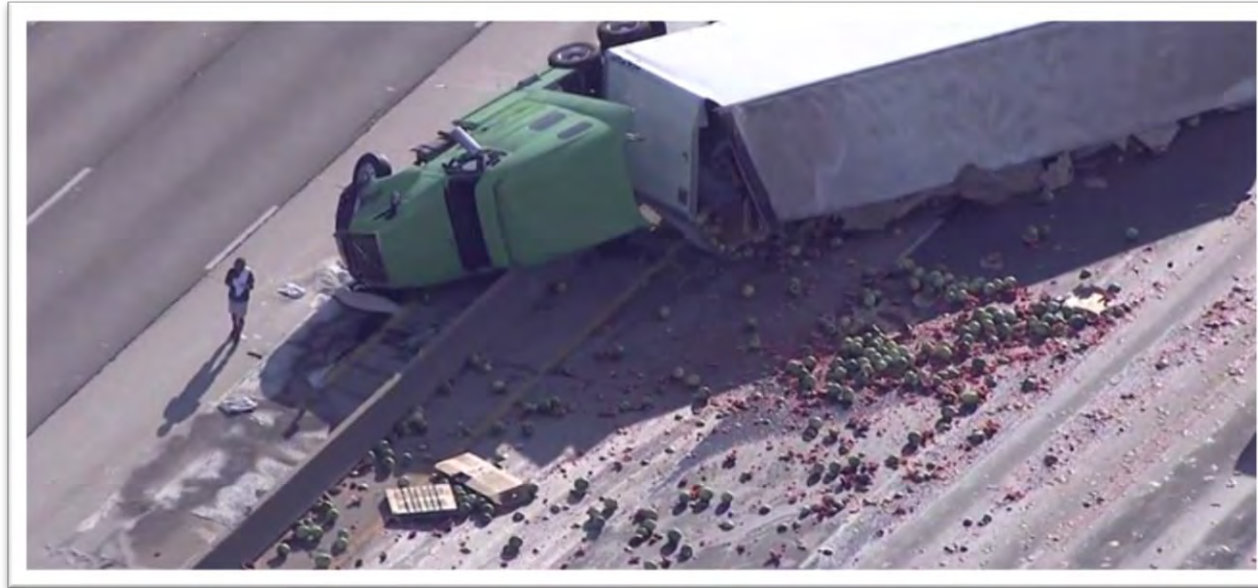
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	Southbound I-270 Before I-55	Left Shoulder	Lane 1	Lane 2	Lane 3	Lane 4	Lane 5	Right Shoulder
		6:00	6:00	6:00	5:51	0:10	0:00	0:00

	Northbound I-270 Past I-55	Lane 1	Lane 2	Lane 3	Lane 4	Lane 5	Lane 6	Right Shoulder
		5:44	5:44	5:44	0:00	0:00	0:00	0:00









# INCIDENT MANAGEMENT


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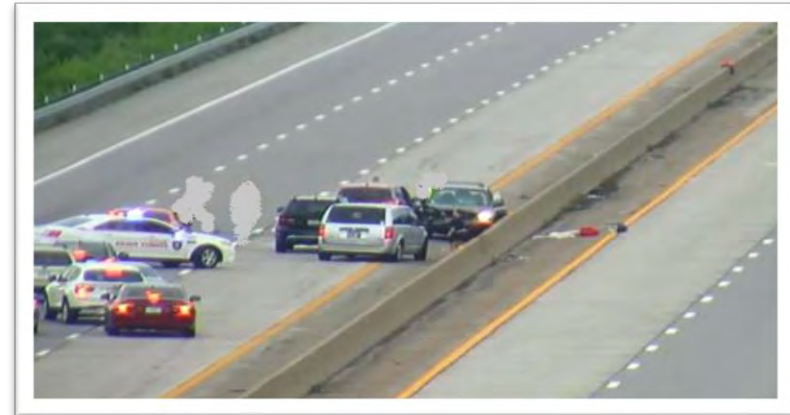


## Major Impact Traffic Incidents and Mitigation

### 7/5/2019 (Friday)

- **Time:** 6:58 pm – 9:22 pm \*\*\*Fatality\*\*\*
- **Location:** St. Louis County – Westbound I-44 past MO 141
- **Event Type:** Two-vehicle Crash
- **Estimated Initial Impact:** Rush Hour: 3 of 3 travel lanes affected equals (=) 100%
- **Incident Details:** TMC operators heard over the scanner a report of a crash with an ejection. After checking the cameras, vehicles were found in the left lane. One vehicle was pinned against the median wall. After the incident we received incident report for guardrail damage from this crash.
- **Action Taken:** Due to the location of the accident Police closed Westbound I-44 at MO 141. This allowed for all traffic to exit at MO 141. Also, the ramp from MO 141 to Westbound I-44 was closed. DMS boards were activated along I-44, MO 141, I-270, I-55, MO 30 and US 67 to warn travelers that I-44 was closed and consider other routes before they approach the scene. A Floodgate message was issued. ER diverted traffic off I-44 and signals were placed to red flash on MO 141. MoDOT worked with MSHP and St. Louis County Police to clear all standing traffic from the interstate and was successful completing reconstruction. St. Louis TMC sent out an incident alert and notified management of the closure.
- **Event Duration:** 2 hours 24 minutes

	Westbound I-44 past MO 141	Left Shoulder	Lane 1	Lane 2	Lane 3	Right Shoulder
Closed Hours/Minutes		2:24	2:24	2:24	2:24	2:24





# INCIDENT MANAGEMENT


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## Major Impact Traffic Incidents and Mitigation


### 7/12/2019 (Friday)

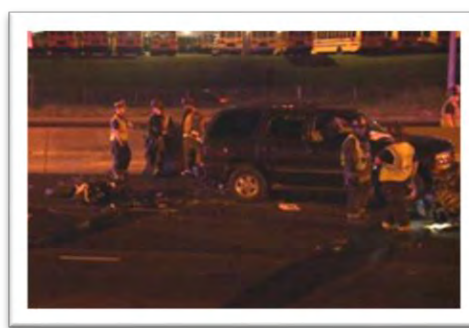
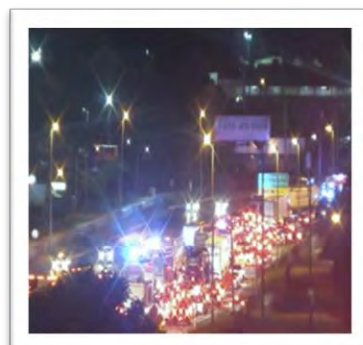
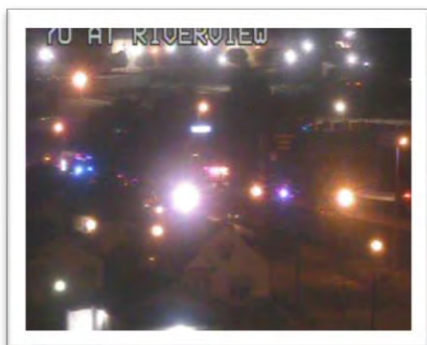
- **Time:** 12:35 am– 6:01am \*\*\* Fatality \*\*\*
- **Location:** St. Louis City – Westbound I-70 past Union / Eastbound before Union
- **Event:** Multi-Vehicle Crash
- **Estimated Initial Impact:** Non-Rush Hour: 4 of 4 travel lanes affected equals (=) 100%
- **Incident Details:** STLMPD called the TMC stating they received a report of a multi-vehicle crash involving 5 motorcycles. After checking the cameras, the crash was found with PD just arriving on scene and closing all lanes. STLMPD informed the emergency response unit that the SUV struck a group of motorcycles. A total of eight motorcycles and one SUV were involved and resulted in two fatalities and nine injuries.
- **Action:** Due to the time the accident occurred the queue was less than half a mile. An Emergency Response unit was sent the scene to help traffic control. St Louis City PD diverted traffic to Union Boulevard and placed the traffic signals on flash to help with traffic. Fire and EMS closed eastbound lane one. Police closed all eastbound lanes. Police stopped traffic just past the end of the Goodfellow entrance to Eastbound I-70. They decided to have motorists drive through an active work zone with workers present. The traffic control company for the work zone was contacted to remove their lane drop if possible. After this information was relayed, the Police dispatch supervisor was contacted by the TMC to divert traffic to Bircher as the best alternative. Due to the SLMPD response, STLCOPD was contacted to help with traffic control. STLCOPD arrived and closed eastbound lanes at Jennings Station briefly. After SLMPD coordinated with emergency response to divert eastbound lanes to Bircher, STLCOPD was released. The TMC used DMS boards along I-70 and I-44 for westbound traffic and boards along I-70, I-170 and US 67 for eastbound traffic to warn motorists of the closures. A Floodgate was also activated for both directions. A second emergency response unit was contacted to help with traffic control. The number of vehicles involved in the crash, the fatalities, and reconstruction lead to an extended incident duration. When the incident finally cleared westbound traffic had a queue of one mile.
- **Event Duration:** 5 hours 26 minutes

	Westbound I-70 past Union	Lane 1	Lane 2	Lane 3	Lane 4	Right Shoulder
Closed Hours/Minutes		5:26	5:26	5:26	5:25	5:19





	Eastbound I-70 before Union	Lane 1	Lane 2	Lane 3	Right Shoulder
Closed Hours/Minutes		1:09	0:54	0:54	0:54





# INCIDENT MANAGEMENT

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## Major Impact Traffic Incidents and Mitigation

### 8/06/2019 (Tuesday)

- **Time:** 5:53 am – 10:03 am \*\*\*Fatal\*\*\*
- **Location:** St. Charles County– Eastbound I-70 past Wentzville Parkway
- **Event Type:** Two-Vehicle Crash
- **Estimated Initial Impact:** Rush Hour: 2 of 2 exit lanes affected equals (=) 100%
- **Incident Details:** Two vehicle crash involving a tractor trailer and pickup truck resulting in fatal injuries to a passenger in the pickup truck.
- **Action Taken:** The TMC operator overheard across the police scanner of a vehicle crash, confirmed the incident on CCTV and notified MoDOT Emergency Response to assist with traffic control. TMC Operators entered the event into ATMS and activated appropriate DMS boards. KC Scout notified to help assist with Eastbound I-70 DMS boards outside the SL District. An incident alert, update, and clearance were sent out to the appropriate email groups. Communication team was also notified. A traffic engineer from CBB was notified and adjusted signal-timing from their location outside the TMC. All lanes were closed, traffic was diverted off onto Wentzville Parkway northbound to US 61 southbound and back onto Eastbound I-70. St. Charles PD, St. Charles Fire, and St. Charles EMS were all on the scene as well as a light tow for the pickup. Crash investigation team responded and conducted their investigation for the fatal. Traffic queued 8.8 miles at its peak and took 33 minutes for traffic to return to normal after the incident cleared. Upon notification of the Eastbound I-70 closure around 6:21 am signals along Wentzville Pkwy from I-70 to Lutkenhaus were set to eastbound diversion plans with a 140 second cycle length. Most traffic was observed moving eastbound on I-70 SOR to Interstate Drive continuing to Route Z. Max times were adjusted at Route Z and Interstate Drive signal to balance the eastbound diversion traffic with the typical Northbound Route Z traffic. The timing plans prevented queuing on NB Wentzville Parkway as vehicles travelled north to Route A / US 61. Additional split time was provided to Eastbound West Meyer for traffic diverting along West Meyer. Signal along Wentzville Parkway allowed to resume normal timing plans at 8:41 am. No significant backups were observed from US 61 to West Pierce. Detour traffic was observed to be stacking up eastbound at Z-Interstate Drive and at 9:30 am signals were adjusted there to provide Westbound Left Turn with 90 seconds under maximum recall to move truck traffic towards I-70. At 9:40 am a Wentzville police officer was observed directing traffic, but with the signal providing enough time for queuing on westbound to clear each cycle, the officer departed at 9:50 am. At 9:55 am Eastbound I-70 reopened both lanes. Signals at Route Z and Interstate Drive continued diversion timing until 10:15 am, at which point Northbound Z was given extra time to clear queues until 10:30 am when the signal was placed back to normal operation. At the Eastbound I-70 Ramp at Wentzville Parkway/SOR signal, the diversion traffic that had exited at Route T/W to use the South Outer Road (SOR) remained stacked for miles. The signal was set to maximum recall for 90 seconds for Eastbound SOR to clear until 10:30 am.
- **Result:** Lack of camera coverage prevented viewing the effectiveness of the police flagging operations at the Eastbound I-70 signal at Wentzville Parkway, but no significant traffic ever developed along Wentzville Parkway towards US 61 interchange. The unsignalized intersection at Eastbound I-70 at Route T/W remained stacked onto Eastbound I-70 for the duration of the incident as large trucks could not easily move through the uncontrolled



intersection. The 70 SOR backed up quickly from this point due to the restricted flow at the Wentzville Parkway signal with the Eastbound I-70 off ramp, Eastbound SOR, and Southbound Wentzville Parkway traffic all converging. Also, traffic was attempting to use the Eastbound SOR to Wilmer Road to Interstate Drive detour path to re-enter I-70 at Route Z.

- **Event Duration:** 4 hours 10 minutes

	Eastbound I-70 past Wentzville Parkway	Left Shoulder	Lane 1	Lane 2	Right Shoulder
Closed Hours/Minutes		4:04	4:04	4:01	4:10